

FRONTISPIECE.



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Longstreng, sculp.

Ariadne?

Published Dec. 40. 1798. by J. Dancer & Hood, St Pauls.

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BEAUTIES
OF
SAINT PIERRE:

SELECTED FROM HIS
STUDIES OF NATURE.

MISERIS SUCCURRERE DISCO.

VIRGIL.

By EDWARD AUGUSTUS KENDALL.



L O N D O N:

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1799.



P R E F A C E.

IN presenting this volume to the public, we have flattered ourselves with a hope that, it will help to spread abroad the writings of an amiable and interesting philosopher, in which are concentrated, we believe, the principles of all knowledge, all consolation, and all happiness.

It should not be understood that, the passages here selected have been chosen as the only BEAUTIES of SAINT-PIERRE. We have preferred these, because we imagine that, they will be most acceptable to young readers, for whose use these pages are principally intended. To such, the perusal of the whole of the works of this author, might appear as an undertaking of too much magnitude for completion; and few will begin that which they do not expect to finish. In this point of view, we persuade ourselves that, the present volume may do some service: to readers of a different cast, arbitrary selections can afford little satisfaction: for, among other disadvantages, they deprive us of the use of our own judgment. A selection like this, should, however,

however, be considered rather as an invitation to the entertainment, than as an attempt to satisfy the guests. We shall call ourselves successful, when the reader is induced by the samples here collected, to resort himself to the stores whence they are brought; and much more so when, still unsatisfied, he lays down SAINT-PIERRE, to study the creation itself; writings are but imperfect copies. We should all study for ourselves, and not habituate ourselves to depend upon others for our very thoughts. Books may supply leading principles: but it is ourselves that must apply them. Those reap little benefit from reading, who spend their time in travelling post through volumes, perpetually indebted to the author for their smiles, their raptures, and their tears. We should all study for ourselves: the longest life, and the most unremitted attention, will only enable us to catch a hasty glimpse of some small part of the paradise of Nature, and to make a few notes—and these scrawled in such a way that, scarce any but oneself, can understand them. A writer is able to express only a little part of what he feels, and even that little is seldom understood. The pleasures of the mind consist of ideas too delicate to be imparted or received. Those happy expressions which have acquired particular reputation, are such as, by a combination of words for which art can supply no rules, have chanced to retain, in a more than ordinary

ordinary degree, that which the feelings suggested. The touch is delicate in the extreme, but if it succeeds, it lasts for ever.

We have mentioned these expressions, and their infrequency, only to shew that, ordinary pages bear little comparison with the ideas they were intended to delineate; and from this consideration to urge the reader to expect originality within himself; and to study over again even the very objects upon which others have pored; because, though all that he sees may have been seen, it has not been described. Novelty will present itself to every seeker: and we should not believe that, the career of human knowledge is at an end; that the roads have been explored to their boundaries, the fields reaped, and the harvests already housed; and that, nothing remains for us but to thresh, and winnow, and grind, and bould, what the industrious of old times have sheaved. No age has passed in which the prejudiced, the blind, and the indolent, have not dreamed that novelty was no more; nor has any age passed in which novelty has not been found to exist:

“ Flushed with the bloom of an eternal youth.”

The STUDIES OF NATURE not only present us with the most delightful novelties, themselves, but shew us, also, the sources of inexhaustible enjoyment. The topics are various, but their object is uniform: it is never obscured, much less forgotten: it is the establishment

tablishment of this pathetic truth: GOD IS GOOD.

In the opinion that, no book whatever can be more pleasing, or more useful to the young, English and French selections have been formed for their use. That both might be beneficial to the same student, the matter contained in each has been much varied from the other, and the arrangement totally different. In this English volume, a few notes have been added; and some additions made to the text itself. The greater part of the pages are occupied by TEN STUDIES, in each of which a leading argument is pursued. To these we have added a short NARRATIVE; and, by way of introduction, we have given a few PASSAGES (the number of which, might, indeed, have been greatly multiplied) that appeared to us to be interesting in themselves, but which could not have a place in our confined selection of STUDIES.

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ERRATA.

- Page 7. line 19, for itinerent, read itenerant.
13. last line, for no, read not.
17. line 2, for bazcks, read barks.
34. line 8, for *us* princes, read *these* princes.
97. line 12, for *nights*, read *fights*.
105. line 17, for *our*, read *her*.
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B E A U T I E S

O F

S A I N T P I E R R E .

S E L E C T P A S S A G E S .

I.

I REMEMBER that, when I arrived in France, in a ship which was returning from the Indies, as soon as the sailors perfectly distinguished the land of their native country, they became almost intirely incapable of attending to the ship. Some fixed their eyes upon it, incapable of turning them away ; others put on their best clothes as if they were immediately to disembark ; there were some who stood talking to themselves ; and others wept. As we approached, the confusion of their senses increased. Having been absent during several years, they admired, incessantly, the verdure of the hills, the foliage of the trees, and even the rocks of the shore, covered with sea-weeds and mosses ; as if every object was new to them. The spires of the villages in which they were born, which they recognized among the distant fields, and named one after

after another, filled them with extasies of joy. But when the vessel entered the port, and they saw upon the quays their friends, their fathers, their mothers, their wives, and their children, who held out their arms, while their eyes were dimmed with tears, and who called them by their names, it was impossible to keep one of them on board: they all leaped ashore, and it was necessary, according to the custom of that port, to hire another set of seamen, to bring the ship to anchor.

What, then, should we do, if we could distinctly see that heavenly country where all whom we have most loved reside? If we were assured by demonstration that, another world exists, I persuade myself that, from that moment, every occupation here would cease. All the laborious and vain anxieties of this life would have an end. The passage from one world to the other being within the reach of every man, who would stay in this? But Nature has covered the path with obscurity, and has placed doubt and apprehensions as centinels.

11.

Complaints have always been made that the unworthy frequently enjoy the gifts of fortune, while the virtuous are destitute. We are often incorrect in our estimate of merit: not so much that we overrate ourselves, as that, we undervalue others: and this results not from injustice, but from ignorance, But virtuous persons are sometimes destitute not only of the blessings of fortune, but of those of Nature: to this, says Saint-Pierre, I reply that, their misfortune often turns to their advantage. When the world persecutes them, they are generally driven into some illustrious career. Misfortune is the road to great talents, or, at least, to great virtues, which
are

are far preferable. "It is not in your own power," said Marcus Aurelius, "to be a natural philosopher, a poet, an orator, or a mathematician; but it is in your power to be virtuous, which is better than all."

III.

Being at Marly, I walked among the thickets of its magnificent park, to see the groupe of children who are feeding with vine branches and grapes, a goat that is represented at play with them. Near this admirable piece of sculpture is a covered pavilion where Louis XV. on fine days, sometimes partook of a colation. As it was showery weather, I entered it for a moment, for shelter. I found three children there, that were much more interesting than the marble children. Two very pretty little girls were employing themselves with much assiduity in gathering from around the arbor, bundles of dry branches that the winds blow from the trees, which they put into a basket that stood upon the king's table, while a little boy, badly clothed, and very lean, devoured a morsel of bread in a corner. I asked of the tallest of these girls, who was about eight or nine years of age, what she meant to do with the wood that she was so eagerly collecting? She replied, "You see, Sir, that little boy there—he is very miserable! He is sent out all day long, to gather wood: when he carries home none, he is beaten: when he picks up some, the Swifs, at the entrance of the park, deprives him of it, and uses it himself. He is faint with hunger, so we have given him our breakfast." After answering me thus, she and her companion filled the little basket. They put it upon his back, and ran before their unfortunate friend, to see if he could pass in safety.

IV.

Juicy and refreshing fruits, as those of a red colour, are found only in the hot season: others, that are useful during the winter, on account of their substantial mealy contexture, and their oils, as chestnuts, and walnuts, remain eatable during a great part of the year: but those which are provided for the accidental wants of mankind, as those of travellers, continue ready at all times. They are not only covered with hard shells, proper to preserve them; but they are found upon the trees at all seasons, and in every gradation of growth. In India, upon the uninhabited shores of the islands, the cocoa tree bears ten, or twelve, bunches of cocoas at once; of which some are in bud; others in flower; others are formed; others already full of milk; others perfectly mature. The cocoa is the tree of the seaman.

It is not the mere heat of the tropics which gives this fertility so constant, and so varied: for the fruits of the trees in India, have as in our own climate, peculiar seasons of ripening, after which they are seen no more. I do not know that any other than the cocoa, and the banana, are produced throughout the year.

The banana is, in my opinion, the most useful tree in the world: because its fruits serve as food without any preparation, and are of an agreeable taste, and very substantial. It yields a branch, or cluster of sixty, or four-score fruits, which ripen all at once; but it puts forth shoots of every height, which produce in continual succession. The progression of fruitage in the cocoa, is in the single tree; and that of the banana in the number of plants. Every where that which is most useful is most common.

The

The productions of our fields, and of our vineyards, present an arrangement that is still more wonderful: for, though the ear of corn has several sides, its grains ripen together, by means of the mobility of its stalk, which exposes it to every aspect of the sun. The vine does not grow in bush-form, nor in tree-form, but is spread *en espalier*, and though its berries are clustered, their transparency renders them proper to be penetrated intirely by the rays of the sun. Nature thus obliges men, by the spontaneous maturity of these fruits that are destined for the general sustenance of mankind, to unite, that they may reap together, and enjoy the harvests. We may consider the corn-field and the vineyard as the most powerful bonds of society. Thus Ceres and Bacchus were regarded in old times as the first legislators among mankind. This title is frequently bestowed upon them by the ancient poets.

V.

“ At the word, *Savage*,” says Father *du Tertre*, a man replete with taste, good sense, and humanity, “ the generality of people will figure in their minds, a species of men that are barbarous, cruel, inhuman, destitute of reason, deformed, tall as giants, hairy like bears: in short, rather as monsters, than as rational creatures: though, in truth, our savages are only savages in name: as the plants and the fruits which nature produces in the forests and the deserts; which, though we call them savage, or wild, possess their true virtues, and properties, in full force and vigour, which are often corrupted by our contrivances, and considerably altered when transplanted into our gardens The savages of these islands*

* The Antilles, or West India Islands: Jamaica, &c.

“ are the most contented, the happiest, the least
“ vicious, the most sociable, the least deformed,
“ and least tormented with the maladies of Europe,
“ of any nation in the world.”

VI.

The natural beauty of the human form is so striking to animals themselves that, to this, principally, we must attribute the empire which he maintains over all the earth: the weak come for refuge under his protection, and the strongest tremble before his sight. *Mathiola* relates that, the lark will save herself amid troops of men, when she perceives a bird of prey. This instinct was confirmed to me by a distinguished officer, who one day saw a lark, in this situation, take refuge among a squadron of cavalry, in which he then served; but the soldier of whom she had asked an asylum trampled her under his horse's feet; a barbarous action which drew upon him, with reason, the anger of the best men in the corps.

I myself have seen a stag, pressed by a pack of hounds, implore, in braying, protection from the pity of strangers who were passing; which agrees with *Pliny's* assertion. I have seen the Indian fowls in farm yards throw themselves at the feet of the country people. If we do not frequently see such instances of animal confidence, it is because they are frightened in our own fields by the continual discharge of fowling pieces, and by other cruel persecutions.

We have heard with what familiarity the ape, and the birds approach travellers in the forests of India. I have seen at the Cape of Good Hope, then in the possession of the Dutch, and even at Cape-town itself, the shores of the sea covered with
marine

marine birds, who reposed themselves upon the shallöps; and other vessels; and, particularly, a large wild pelican who was playing, close to the custom-house, with a great dog whose head, among other antics, she took into her large beak. This sight gave me immediately upon my arrival, a favourable prejudice respecting the happiness of the place, and the benevolence of the people; and I was not mistaken.

But dangerous animals, on the contrary, are seized with terror at the sight of man, unless they are forced from their natural habits by extreme necessity. An elephant in Asia, suffers himself to be led almost by a little child. The African lion retires roaring, from the hut of the hottentots; he resigns the land of his ancestors, and seeks a kingdom among forests and rocks that are untraversed by man. The enormous whale, amid his own element, trembles, and flies before the little canoe of the Laplander.

VII.

Every thing in nature is a series of concatenation. Frequently the most trifling observation leads to the most important discoveries. A little piece of iron, that turns toward the north, guides fleets through the trackless desarts of the ocean; and a reed of an unknown species, cast upon the beach of the Azores, led *Christopher Columbus* to imagine the existence of the American world.

VIII.

I shall remark upon the subject of mines of gold, that they are placed like those of all other metals, not only upon the most elevated parts of continents, but upon icy mountains.

The famous gold mines of Peru, and Chili, are, as is well known, in the Cordeliers, a chain of mountains that extend along the whole western coast

of South America. The gold mines of Mexico are situated in the neighbourhood of Mount Saint Martha, which is covered with snow during the whole year. The rivers of Europe that bring down gold-dust upon their shores, have their sources in icy mountains. The Po, in Italy, issues from those of Piedmont. But, without leaving France, we may count ten rivers that precipitate gold-dust, and which have all of them their origin in icy mountains. Such is the Rhine, from Strasburg to Phillipsburg; the Rhone in the Pays de Gex, the Doux in Franche-Comté, which have all three their sources in the icy mountains of Switzerland. The Cese, and the Gardon descend from those of the Cevennes. The Ariege, in the Pays de Foix; the Garonne, in the vicinity of Toulouse; the Salat, in the County of Conserans; and the rivulets of Ferriet and Benagues, have all their springs in the icy Pyrennées.

This observation may be extended, as I believe, to all the gold mines in the world, even to those of Africa; of which the rivers that bring down gold-dust, as the Senegal, descend from the mountains that are called the *Mountains of the Moon*.

IX.

Certain it is that there are points of attraction which renovatethe mines of metals. It is by means of those attractive matrices that those mines are inexhaustible, as has been remarked in many places, particularly in the Isle of Elba, situated in the Mediterranean. This little island is altogether an iron mine, from what they had taken, even in the time of *Pliny*, an immense quantity of that metal, without its being perceptible, as he tells us, that it was in the smallest degree diminished.

X.

There are metals not so highly prized as gold, but much more useful, the elementary attractions of which might, perhaps, procure us very important accommodations.

The peaks of the mountains, and their long crests, are filled with iron, or copper, mixed with a vitreous body, of granite or chrystal, which attract rains and storms, as veritable electric needles. There is not a seaman but has a thousand times observed these peaks, and these crests, covered with a cap of clouds which envelopes them, and frequently hides them intirely, without once suspecting the cause. Our learned, on the other hand, have imagined, from the charts, that these protuberances are the ruins of the primitive earth, and, having thus settled the matter, they give themselves no trouble respecting their effects upon the present operations of Nature. We should observe that these pyramids, and metallic crests, like iron and copper mines, are always met with in elevated situations, and at the sources of all rivers, of which, by means of their attractions, they are the principal causes. The general inattention to this subject arises from this: seamen observe, but do not reason; and the learned reason, but do not observe. Certainly, if the experience of the one had been joined with the sagacity of the other, prodigious discoveries would have followed.

I am persuaded that, in imitation of nature, it might be possible to form, with electric stones, artificial fountains that would attract rainy clouds, in parched and dry places, as chains, and rods of iron, attract lightening. It is true that, princes only could provide for the expence of such vast and useful ex-

periments: but they would preserve their memory for ever. The Pharoahs, who built the pyramids of Egypt, would not have drawn down upon themselves the curses of the people, as *Pliny* relates, for their enormous and useless labours, had they elevated in the sands of Upper Egypt some electric pyramid, that would have formed an artificial fountain. The Arab who should go to drink there, at this day, would bless their names: whereas, they were unknown, and intirely forgotten, even in the time of the Romans.

XI.

The length of an animal's life is sometimes proportioned to the duration of the vegetable that nourishes it. A number of caterpillars come into life and die with the leaves on which they feed. There are insects that exist only five hours, such as the ephemera. This species of fly, about half the size of the little finger, is produced from a fluviatic worm that is found at the mouths of rivers particularly, on the waters edge, in the mud, where it digs for subsistence. This worm lives three years, and at the end of this period, about Midsummer-day, it changes, almost suddenly, into a fly, which appears in the world at six o'clock in the evening, and dies at eleven at night.

XII.

Though nature employs an infinity of means, she permits man only the end which she proposes. Her works are subjected to rapid destruction: but proofs always exist of the immortal constancy of her designs. It is on that she wishes to fix his heart and his mind. She wishes to render man good and happy,

happy, rather than ingenious and great. Every where she weakens necessary evils, and every where she multiplies even superfluous blessings. Life endures for an whole age : death only an instant. She causes man to behold, during their whole period, the agreeable developements and growth of life ; but conceals from him with tender, with maternal, precaution, the hasty progress of dissolution.

If an animal dies, if plants rot in a morass, putrid emanations, and reptiles of disgusting figures, forbid us to approach. An infinity of secondary creatures have been created for the very purpose of quickening the decomposition.

XIII.

Nature drives us far from the spectacles and ministers of destruction, and invites us to her harmonies. She has multiplied these harmonies wherever they might be useful to us ; and she considers that as useful which delight us. In this benevolent attention to us, she has gone far beyond the laws which she seems to have prescribed to herself, and far beyond what our study of those laws could lead us to expect as necessary consequences. It is thus that dry and barren rocks repeat, by their echoes, the murmurs of the waters and of the forests ; and the smooth surfaces of the waters, which have neither hills nor forests of their own, represent these, by reflection, in all their colours and their forms.

It is by this unbounded benevolence that, the action of the sun is multiplied wherever it is most necessary, and weakened in every place where it would be hurtful. First, the sun is five or six days longer in our northern hemisphere than it is in the southern, because, in ours is contained the greater part of the continents, and of the inhabitants of the world. Its disk appears in our horizon, before

it is risen, and after it is set : this, added to the twilight, considerably lengthens our days. The colder it is, the more is this refraction of its rays extended : for this reason, it is greater in the morning than in the evening, in the Winter than in Summer, and at the commencement of Spring, than at that of Autumn. When the star of day has left us, during night the moon appears, and reflects its light, with varieties in its phases, that have connections still unknown, with many species of animals, and particularly fishes, who travel only in the night, at periods which this luminary indicates. The farther the sun retires from either pole, the more are its rays refracted there. But when it has intirely abandoned it, its light is supplied in a most admirable manner. First, the moon, by an incomprehensible movement, goes to replace it, and appears perpetually above the horizon, without ever setting. This was observed in 1596, at Nova Zembla, by the unfortunate Hollanders, who passed the winter in the seventy-sixth degree of north latitude.

It is in these dreadful climates that Nature has multiplied her resources, that she may bestow on living creatures the blessings of light and heat. The sky is illumined by the *aurora borealis*, which casts, even to the Zenith, rays of gold coloured, white, red, and moving light. The poles are more brilliantly decked with stars than any other part of the firmament. The snows which cover the ground shelter a part of the plants, and by their brightness dispel some portion of the darkness of night. The trees are covered with moss that catches fire from the smallest spark ; and the very earth is covered with mosses, especially under the woods, of so great a depth that, I have sunk, oftner than once, to my knees, in those of Russia. To conclude, the animals

mals who live there are covered with fur, which hides their very nails.

But as the cold is, in its turn, a very great blessing in the Torrid Zone, Nature has employed a thousand methods to increase its powers in that Zone, and to weaken the light and the heat of the sun. First, she does not permit there, the refractions of the atmosphere. There is scarcely any twilight before the rising, or, after the setting of the sun. Where it is in the Zenith, it is veiled with many clouds, which shade the ground, and refresh it by their waters.

XIV.

DAMPIER, to describe the *banana*, has compared it, when stripped of its thick and five-panneled skin, to a large sausage; its substance and its colour to fresh-butter in winter, its taste, a mixture of apple, and of the pear called the *bon chretien*, or *good christian*, which melts in the mouth, like a marmalade.

XV.

There are flowers, such as the compound, which, being in an horizontal position, and altogether uncovered, behold, like the sun, our horizon, from its rising till its setting: such is the flower of the dandelion. But this has a peculiar method of sheltering itself: it closes when the heat becomes too great. It has been observed to open, in Summer, at half past five in the morning, and folds in its petals at nine o'clock. The flower of the garden-lettuce, which is, on the contrary, a vertical plane, opens at 7 o'clock, and closes at 10. It was by a series of these observations that, the celebrated Linnæus had formed a botanical time-piece: for he had found plants that opened their flowers every hour of the day, and of the night.

There is cultivated in the king's garden, a species of serpentine aloe, without thorns, whose large and fine flower exhales the odour of vanilla, during the time of its bloom, which is very short. It opens only in the month of July, about five o'clock in the afternoon: you may then see it open, unfold its beauties by little and little, expand them, fade and die. At ten o'clock in the evening, it is totally withered, to the great astonishment of the spectators, who flock to it in crowds; but nothing is admired that is not uncommon. The flower of our common thorn (not the white thorn) is still more curious: for it blooms so rapidly that, there is scarce time to observe it.

XVI.

The seeds of thistles, of corn-bottles, of dandelion, of succory, &c. have wings, plumes, tufts, and various other means of travelling through the air, which convey them to various distances. Those of the grasses, which likewise travel very far, are provided with chaff, and with husks. Others, such as the yellow gilly flower, are formed into light scales; and these fly with the least breath of wind, and plant themselves in the smallest crevice of a wall. The seeds of the largest trees of the mountains are not less volatile. That of the maple has two membranous pinions, resembling the wings of a fly. That of the elm is cased within an oval leaf. Those of the cypress are so small as to be almost imperceptible; and are, consequently, easily scattered. Those of the cedar are terminated by broad thin plates, which, together, form a cone. The seeds are in the centre of the cone; and when they are fully grown, the plates to which they adhere, detach themselves from each other, like cards from a pack, and each flies far away with its own little seed.

XVII.

XVII.

The seeds of the plants of the mountains that appear too heavy for flying, have other resources. The peas of the balsamine have pods whose elasticity, in bursting, throws them to a great distance. There is in India, a tree, of which I cannot recollect the name, that discharges its seed with a noise that resembles the report of a musquet. Those which have neither tufts, nor wings, nor elastic pods, and which, from their weight, seem condemned to remain at the foot of the vegetable that produces them, are, frequently, the very seeds that travel farthest. They fly with the wings of a bird. It is thus that many berries and nuts are re-sown. Their seeds, being inclosed by stony shells, are indigestible. The birds swallow them, and plant them in the cornices of towers, in the crevices of rocks, and on the trunks of trees, beyond rivers, and even rocks. It was thus that a bird of Moluccas re-peopled with nutmegs the desert of islands of that archipelago, in contempt of all the efforts of the Hollanders, who destroy those trees in every place wherein their existence cannot be advantageous to their own commerce.

XVIII.

Nature has placed in the very bosom of the torrid zone, and in its vicinity, chains of icy mountains which accelerate and redouble the effects of the polar winds, especially along the seas, where fermentation was most to be feared, from the alluvion of the bodies of animals and of vegetables which are continually deposited there. Thus, the chain of Mount Taurus, that is always covered with snow, begins
in

in Africa, upon the burning shores of Zara, and, coasting the Mediterranean, passes into Asia, where it casts forth long branches in various parts, which embrace the gulphs of the Indian ocean. Similarly in America, the long chain of the Cordeliers of Peru and Chili, the elevated ridges of which traversing Brazil, cools the long and burning shores of the South Seas, and of the Gulf of Mexico.

XIX.

These elementary dispositions are only part of the resources of nature, for temperating the heat of sultry climates. She, there, shades the ground with creeping vegetables and trees, that are perfect parasols. Some of these, as the cocoa-tree of Sechelle's Islands, and the talipot of Ceylon, have leaves that are from twelve to fifteen feet in length, and from seven to eight in breadth. She there covers the animals with hairless skins; and colours them, in general, like the herbage, with dark and brownish tints, in order to diminish the reflexes of heat and light.

XX.

The great art of exciting emotion consists in opposing material, or visible objects, to such as intellectual, or existing only in the mind. Then it is that the soul takes a daring flight. It passes from the visible to the invisible, and enjoys itself in its own way, if I may use the expression, by extending itself into the vast field of sentiment and of intelligence. Among certain tribes of Tartary, when a great man dies, his groom, after the burial, leads by the bridle the horse which the deceased had been accustomed to ride; he places upon him the clothes of his master, and

and walks him in silence before the assembly, which, by that spectacle, are melted into tears.

When those circumstances that are to be felt, not expressed, are numerous, and connected with some virtuous affection, the emotions of the soul redouble. Thus, when, in the *Eneid*, *Iulus* promises presents to *Nisus* and *Euryalus*, who are going in search of his father at *Palanteum*, he says to *Nisus* :

Bina dabo argento perfecta atque aspera signis
Pocula, devotâ genior quæ cepit Arisbâ;
Et tripodes geminos, auri duo magna talenta,
Cratera antiquum quem dat Sidonia Dido.

LIB. IX.

“ I will give you two silver pitchers, with figures
“ in relief, of excellent sculpture. They became
“ my father’s at the capture of *Arisba*. I will add
“ to these, two tripods of the same fashion, two
“ large talents of gold, and an antique cup that
“ was given to me by *Queen Dido*.”

He promises to these two young men, whom friendship had so united, double presents: two pitchers; two tripods as stands for the pitchers after the usage of the ancients; two talents of gold to fill them with wine; but only one cup from which both were to drink. Again, what a cup! Of this he boasts neither the material of which it is composed, nor the workmanship that had been bestowed upon it, as he did in the other presents: he attaches to it moral recommendations of much more value to the two friends. It is antique, it is not the prize of violence, but the gift of affection. Without doubt, *Iulus* received it from *Dido* when she thought to have married *Eneas*.

XXI.

XXI.

There is a language that seems to appertain more particularly to that first principle of ourselves which we have called *sentiment*: it is MUSIC. I shall not say much upon the incomprehensible * power which it possesses of calming and exciting the passions in a manner independent of reason, and of creating sublime affections disengaged from all intellectual perception; its effects are sufficiently known. I shall only observe that, it is so natural to man that, the first prayers addressed to the Deity, and the first laws of all nations were set to music. Man loses a taste for it only in polished society, the very languages of which, lose, at length, their accent. This is because the connections of society destroy the correspondencies of nature. In society we reason much, but almost cease to feel. †

XXII.

* The power of music, we may presume, is called incomprehensible because it affects us without the use of words: but sound is as truly the language of the feelings as words are that of the understanding. If this be admitted, the influence of music is not more incomprehensible than any other influence to which the nature of man is subject.

† The prevailing attachment to music seems to contradict the author: but, probably, he denies the reality of the *taste*; that is, he denies that music is *felt* by all who practise, or who praise it. But though it is undoubtedly true that, many would address themselves to spinning of platters, were that diversion equally fashionable, it is not to be believed, upon any subject like the present, that the majority are insincere. The love of music is, perhaps, by the beneficence of the Creator, peculiarly infused among a luxurious people, because when every other avenue is shut, this carries nature to their very hearts. And nature is always virtue.

It is obvious that music, supersedes, in the present day,
every

XXII.

The way in which the CREATOR has provided for the thirst of man in sultry places, is worthy no little admiration. He has placed in the burning sands of Africa a plant of which the leaf, turned round like a cruet, always contains a glass full of water: the gullet of this cruet is shut, by the extremity of the leaf itself, so completely, that the water cannot evaporate. He has planted upon some sultry spots in the same country, a large tree, which the negroes call *boa*, of which the trunk, monstrously large, is naturally hollowed as a cistern. In the rainy season it is filled with water, which it preserves fresh during the greatest heats, by means of the tufted foliage that crowns its summit. Upon the burning rocks of the Antilles, he has reared vegetable fountains. A *lianne*, called the *water-lianne*, is commonly found there, that is so full of sap that, if you cut a mere branch, a quantity of water will immediately flow, that is quite sufficient for a draught, and is perfectly limpid and pure.

In the swamps of the Bay of Campeachy, travellers find other relief: these swamps, on a level

every other amusement. In public places, music triumphs, and worthily, over every other consideration. It has destroyed the importance and dignity of the drama: for why should good plays be written, or good acting exhibited, if the most wretched jargon, and the most abject buffoonery, will be accepted for the sake of a few songs and dances, introduced in a manner that disgusts those, at least, who possess general taste? But the stage is evidently decaying: and should the time come when it shall no longer exist, which may, perhaps, be the consequence of absolute refinement, and when concerts be resorted to in its stead, what will there be to regret?

with

with the sea, are almost intirely inundated in the rainy season, are so parched in the dry season that, several huntsmen, who had lost their way in the forests with which they are covered, had nearly died of thirst.

The celebrated traveller, Dampier, relates that, he many times escaped this fate by the assistance of a very extraordinary vegetable, which he had observed upon a species of pine that is very common there: it resembles a bunch of leaves, placed upon one another in stages; and on account of its form, and of the tree upon which it grows, he calls it the *pine-apple*. This apple is full of water, so that on piercing the base with a knife, there immediately issues a good pint of water, exceeding clear and wholesome.

Father *du Tertre* relates, that he frequently found similar refreshment in the cornet-shaped leaves of a species of a balizier, which grows upon the sandy plains of Guadaloupe. I have heard many hunters say that, nothing is more proper for gratifying thirst than the leaves of the mistletoe, which grows upon our own trees.

XXIII.

There is not a single flower that is pleasing to the senses of man, but which grows at his foot, is within the reach of his hand, or is, at least, conspicuous to his eye. All odoriferous flowers are placed upon herbage or upon shrubs, as the heliotrope, or sun-flower, the pink, the gilly-flower, the stock, the violet, the rose, and the lilach. Nothing resembling these grows upon the lofty trees of our forests. Some brilliant flowers grow upon large trees of foreign countries, as the tulipifera, and the great chesnut of India; but these, both by their size and colour, are rendered perfectly visible

visible to our eyes. Some trees of India, are, indeed, highly perfumed: but this perfume is all over the tree, in the leaves, not in the blossoms, which are scarcely apparent, and have frequently, as in the cinnamon, in direct contrast with the tree, the most disagreeable odour. The beautiful and fragrant flower of the magnolia grows upon the lower part of the tree. Besides, the laurel that bear it, is like the spice trees, a tree of moderate elevation.

There is not less adaptation in the forms and sizes of our fruits. There are many that seem shaped for the mouth of man, as cherries and plumbs; others for his hands, as apples and pears; others much larger, as melons, are divided on the rind, and appear to be intended for a family refreshment: there are some, even, in India, as the jacq, and, with us, the pumpkin, that may be divided among neighbours. Nature seems to have followed the same proportions in the various sizes of fruits destined for the nourishment of man, as in the magnitude of the leaves which are intended for shade in hot countries: for of these there are some large enough to shelter a single person; others, an whole family; others, all the inhabitants of an hamlet.

Nature has made parasols, in hot countries, for whole villages: for the fig-tree, which in India, is called, the fig-tree of the banyans, grows even upon the burning sand of the sea shore, casting, from the extremity of its branches, a multitude of shoots, which, inclining toward the earth, take root, and form, round the trunk, a quantity of arcades, covered with impenetrable shade.

The interesting and unfortunate *Robert Knox* tells us, in his excellent account of the island of Ceylon, that one of the leaves of the talipot is large enough to cover fifteen or twenty persons. When it is dry, adds he, it is at once strong and pliant, so that it may be folded and unfolded at pleasure, being
naturally

naturally plaited like a fan. In its folded state, it is not bigger than a man's arm, and extraordinarily light. The people cut it into triangular pieces, though it is naturally round, and each carries a piece over his head, holding in his hand before him the most pointed end, to open a path through the bushes. The soldiers make tents of these leaves. He regards this tree, with reason, as one of the greatest blessings of Providence, in a country that is alternately burnt by the sun, and inundated by the rains during six months together.

In our temperate climates, we experience equal benevolence from the hand of nature. It is in the hot and thirsty season that she bestows upon us an abundance of fruits full of refreshing juices, such as cherries, peaches, and melons; and, at the approach of winter, those that warm us by their oils, as the almonds, and the walnut. Some naturalists have regarded the ligneous, or woody, shells, of these fruits, as intended to preserve them from the cold of winter; but they are also for the purpose of floating, and travelling, in order that they may plant themselves upon banks never enriched with them before.

xxiv.

The AUTHOR OF NATURE has judged the harmony of sounds to be so necessary to man, that there is not a single spot upon the whole earth that has not its singing bird. The linnet of the Canaries commonly frequents, in those islands, the flinty gutters of the mountains. The goldfinch loves the sandy downs; the lark the fields; the nightingale deep thickets, by the side of brooks; the bullfinch with its sweet notes perches upon the white thorn; the thrush loves the laurel; the yellow-hammer, the greenfinch,

greenfinch, and all other singing birds have their favourite stations.

It is very remarkable that, every where, these little birds instinctively, as it were, approach the habitation of man. If there is one straw-roofed dwelling amid an extensive forest, to the neighbourhood of that cabin all the singing birds confine themselves. They are never found in uninhabited districts. I have travelled more than six hundred leagues in the forests of Russia, and I have never seen little birds but in the environs of villages. In visiting the fortifications of Russian Finland, with the general of the corps in which I served, we sometimes went twenty leagues in a day without seeing either a village, or a bird. But when we saw sparrows flying among the trees, we imagined that we were near some inhabited place. This indication never deceived us. I mention this circumstance more particularly, because it will, possibly, be of use to persons who may lose their way in the woods.

Garcilaso de la Vega relates that, his father having been detached from Peru, with a company of Spaniards, to make discoveries on the other side of the Cordeliers, feared that, he should have died with famine in the uninhabited vallies and marshes. He never could have got out had he not perceived in the air a flight of paroquets, which led him to suspect that there were dwellings somewhere in the neighbourhood. He marched toward that point of the compass to which the paroquets had fled, and he arrived, after incredible fatigues, at a tribe of Indians who had fields of maize.

We may observe that, nature has not given an agreeable note to any sea or river bird, because it would be lost amid the noise of the water, and because the ear of man could not enjoy it at the distance

tance of his abode upon land. If there are swans that sing, as is pretended, their song can have few modulations, and it must resemble the cries of the duck, and of the goose. That of the wild swans who lately came to establish themselves at Chantilly, have only four or five notes. Aquatic birds have shrill and piercing cries, fit to be heard in the regions of winds and tempests which they inhabit; and well adapted to their noisy abodes, and melancholy solitudes.

The melodies of song birds have similar adaptations to places which they occupy, and even the distances at which they live from our habitations. The lark, who makes its nest among our corn, and who loves to rise out of sight into the air, sings so loudly that, it is heard long after it is lost to our eyes. The swallow, who flies grazing the walls of our houses, and who reposes upon our chimnies, has a little soft chirping voice, which does not stun the ear as it would if it were as loud as that of the songsters of the thickets.

The nightingale, for instance, is heard at the distance of half a league. This bird avoids the company of man; but he loves to place himself within sight of our habitations, and within reach of our ears. For this purpose, he chooses the most inclosed places, that their echos may increase the power of his voice. When he has settled himself in the orchestra, he sings an unknown drama, that has its exordium, its developements, and its recitatives; mixed, sometimes with the blithest sounds of joy, sometimes with bitter and lamentable recollections that end in long-drawn sighs. His song is heard in the beginning of that season in which the charms of Nature are restored, and it seems to present man with a picture of the varied career that she has to run.

The

The seeming ruins of the earth, as the rocks that roughen its surface in so many places, have all their use. Rocks appear to us as ruins, only because they are not squared nor polished like the marble of our monuments, but their projections and crevices are necessary for vegetables and animals, who there seek nourishment and shelter. It was for the benefit of her sensitive and vegetative creation that nature made the fossile kingdom; and as soon as man has elevated masses of stone upon the surface of the earth, she hastens with her chisel to destroy its useless regularity, in order that it may contribute to the general harmony of the world.

If we enter into the vast consideration of the beginning and the end of *her* works, those of the most celebrated people, and of the highest antiquity, become extremely frivolous in our eyes.

A little pebble upon the edge of our brooks, is more ancient than the pyramids of Egypt. Many cities have been destroyed since that was created. If I wish to add some moral sentiment to the monuments of nature, I may say, while looking on a rock: "Here, perhaps, sat the good Fenelon, meditating upon his divine Telemachus: hereon, haply, at some future day, it may be graven that he was the teacher from whom Kings learned that glory consists in the happiness of mankind, and happiness in the advantages of agriculture; posterity will stop to look on the same stone that I have contemplated. Thus it is, that I embrace the past and the future, at the sight of a mere insensate rock; and, consecrating it by a simple inscription, render it more venerable than if I were to decorate it with the five orders of architecture.



STUDIES OF NATURE.

FIRST STUDY.

.....

IMMENSITY OF NATURE.

IT is several years since I formed the design of writing a general history of nature, in imitation of *Aristotle*, *Pliny*, Chancellor *Bacon*, and many illustrious modern authors. The field appeared to me so vast, that I could not believe it to have been entirely trodden over before me. Besides, nature invites men of every age ; and if she promises sublime discoveries to genius only, she reserves some little harvests at least for the ignorant ; and for such, especially, as, like myself, stop at every step, delighted with the beauty of her divine productions.

I proposed to begin the composition of my work when *I had ceased from observing*, and when I had collected *all the materials necessary for the history of nature* : but I discovered myself to be like the child who dug a hole in the sand with a shell, to hold the water of the ocean.

The extent of nature is infinite, and I am a man, confined on every side. Not only *the general history*
D of

of creation, but that of the *smallest plant*, is far above my capacity. I will relate the circumstance that convinced me of this.

THE STRAWBERRY.

One day, in summer, while I was busy in putting in order some observations which I had made upon the harmonies of this globe, I perceived upon a strawberry plant, which had been accidentally placed in my window, some small flies, which were so exceedingly beautiful, that I took a fancy to describe them. Next day I saw a different sort upon the plant, and these, likewise, I described. In the course of three weeks, proceeding in this manner, I wrote descriptions of *thirty-seven species of insects which resorted to my strawberry-plant*. At length they came in such crowds, and presented such variety, that I was obliged to relinquish this study, though very amusing, because I had neither *leisure*, nor, to confess the truth, *expression*.

The insects which I observed were all distinguished from each other by their colours, their forms, and their motions. There were some that shone like gold, others were of the colour of silver, and others of brass: some were spotted, some striped, blue, green, brown, chestnut-coloured. The heads of some were rounded like a turban, those of others were drawn out in the figure of a cone: some were dark like a tuft of black velvet, others sparkled like a ruby. There was not less diversity in their wings. In some they were long and brilliant, like transparent plates of mother-of-pearl; in others short and broad, resembling the net-work of the finest gauze. Each had a particular manner of disposing and managing his wings. Some carried theirs perpendicularly, others horizontally; and they seemed to take pleasure in displaying them. Some flew spirally,
like

like butterflies; others rose into the air by flying against the wind. This is like the mechanism of a paper-kite, which rises while the wind is against it.

Some settled upon the plant merely to deposit their eggs; others, to shelter themselves from the sun. But the greater part came for reasons with which I am totally unacquainted; for some went and came in incessant motion; others remained a considerable time, removing only parts of their bodies. A great number were entirely motionless, and were occupied, perhaps, like myself, in making observations. I paid no attention to many tribes that were attracted by my strawberry, because they were sufficiently well known: such as the snail, which nestles under the leaves; the butterfly, which hovers round; the beetle, which digs about the roots; the small worm, which finds the means of life in the *parenchyme*, that is, in the mere thickness of the leaf; the wasp, and the honey-bee, which hum around the blossoms; the gnat, which sucks the juice of the stem; the ant, which licks up the gnat; and, to omit the rest, the spider, who makes prey of most of these, and who, to catch them, spreads his net all over the neighbourhood.

However minute these objects may be, they were surely worthy of my attention, since NATURE BESTOWED UPON THEM HERS. I could not refuse them a place in my general history, while nature gave them one in the universe. For a still stronger reason, had I written an history of my strawberry plant, I must have taken these into the account. Plants are the habitations of insects, and one cannot give the real history of a city without speaking of its inhabitants.

The immeasurable extent of my undertaking will be still more evident, if we recollect that *my strawberry plant was not in its natural situation.* In the open country, or the border of a wood, or along the

brink of a rivulet, it would have been resorted to by many other species of living creatures. It was in a pot of earth, amid the smoke of Paris. I observed it only at vacant moments. I knew nothing of the insects who visited it during the *various hours of the day*; still less was I acquainted with those who came at *night*, attracted by its *odorous emanations*, or, perhaps, by a *phosphoric light*, which escapes our senses. I was ignorant of those who might frequent it at *different seasons of the year*, and the *rest of its connections* with the *welfare* of reptiles, amphibious animals, fishes, birds, quadrupeds, and, above all, with man, who calls every thing worthless which he cannot immediately use.

But all these observations, made from the height of my greatness, if I may use the expression, would, at last, be very far from sufficient; for, in this case, *my knowledge would never be equal to that of one of the flies* who make it their habitation. Not one of these, on examining it with his little spherical eyes, but must distinguish an infinity of objects, which I could not perceive without a microscope, and after many laborious researches. *Their eyes are even greatly superior to the microscope*, which only shews us the objects that are in its focus, that is, at the distance of a few lines; whereas they perceive, by a mechanism of which we have no idea, *every thing that is close, and that is far off*. Their eyes are at once microscopes and telescopes. What is more, by their circular disposition round the head, they have the advantage of *viewing the whole circuit of the heavens at the same instant*; while those of the astronomer can take in, at most, only the *half*. Thus my flies must see, at a single glance, in my strawberry plant, a distribution and combination of parts, which I could not discern with a microscope: for that instrument

ment would shew only a single part at a time, separated from all the rest.

Upon examining the leaves of this plant with a lens,* which magnified only in a very trifling degree, I found *them divided into compartments, surrounded with bristles, separated by canals, and strewed with glands.* These compartments appeared to me to be like *large verdant inclosures*, their bristles like *vegetables* of a particular order; of which some were upright, some inclined, some forked, some hollowed into tubes, from the extremity of which a liquid distilled; and their canals, as well as their glands, seemed full of a brilliant fluid. In plants of a different species, these bristles, and these canals, exhibit forms, colours, and fluids, totally different. There are even glands which resemble basons, round, square, or radiated.

Now, nature has made nothing in vain. Wherever she has prepared an habitation, she immediately peoples it. She is never straightened for want of room. She has placed animals with fins in a single drop of water, and in such multitudes, that *Leewenhoeek*, the natural philosopher, counted thousands! Many others after him, and among the rest, *Robert Hook*, have seen, *in one drop of water*, as small as a grain of millet, some *ten*, others *thirty*, and some as far as *forty-five thousand*! Those who know not how far the patience and sagacity of an observer can go, might perhaps doubt the accuracy of these observations, if *Lyonnet*, who relates them in *Lesser's Theology of Insects*,† had not demonstrated the possibility of it, by a piece of mechanism, exceedingly simple. We are certain, at least, of the existence of those beings whose figures have actually been drawn. Others are found, *whose feet*

* Magnifying glass.

† Book II. chap. 3. See the last note.

are armed with claws, on the body of the fly, and even on that of the flea!

It is credible, then, from analogy, that *there are animals feeding upon the leaves of plants*, like the cattle on our meadows, which repose under the shade of those bristles or bushes, imperceptible to our eyes, and who drink from the glands, which are round and brilliant like suns, *liquors of the colours of gold and silver*. Every part of the flower must exhibit spectacles to them of which we can have no idea. The yellow *antheræ* of flowers, suspended by fillets of white, exhibit to their eyes double *rafters of gold* balanced upon *pillars fairer than ivory*; the *corolla* must seem to them an *arch of unbounded magnitude*, decorated with the ruby and the topaz; the *nectarium*, *rivers of sugar*; the other parts of the floweret must shew *cups, urns, pavillions, domes*, which neither the architect nor the goldsmith have yet learned to imitate.

I do not say this from conjecture; for having one day examined with a microscope the flowers of thyme, I distinguished, with the most extreme admiration, *superb flagons with long necks, which were formed of a substance resembling the amethyst, from the gullets of which seemed to flow ingots of liquid gold*. I have never examined the simple *corolla* of the smallest flower, without finding it composed of an admirable substance, half transparent, studded with brilliants, and tinted with the most lively colours. Beings who live under their rich reflexes,* must have ideas, very different from ours, of light, and of the other phenomena of nature. *A drop of dew*, filtering in the capillary and

* The only idea, and that extremely imperfect, which we can form of these *rich reflexes*, must be derived from painted windows, through which the sun

‘Pours the rich flood of mellowed day.’ TRANSL.

trans-

transparent tubes of a plant, presents to their eyes *a thousand cascades* ; the same drop fixed, as a wave, on the extremity of one of the bristles, must seem *an ocean without a shore*, evaporated into the air, a vast *aërial sea*. They must, of course, see fluids ascending, instead of descending ; assuming a globular form, instead of sinking to a level ; and rising into the air, instead of falling !

In these *ephemerous** beings we must see the youth of a single morning, and the decrepitude of one day !

Such, then, must have been my strawberry plant, and its natural inhabitants, in the eyes of the winged insects which alighted upon it : for the reader will remember that I have been speaking only of those minute creatures which are imperceptible to the naked eye : but if I had been capable of acquiring as much knowledge respecting the plant, as is possessed by these itinerent insects, I should still have been far from acquiring the full history of it. To accomplish this I must study its relation to the other parts of nature ; to the sun, which opens its blossoms ; to the winds, which sow its seeds : to the brooks, the banks of which it strengthens with its spreading roots, and embellishes with its foliage, its flowers, and its fruits. I should also know how it is preserved in winter, during a cold capable of cleaving stones asunder ; and how it reappears in verdure, in the spring, without any assistance to preserve it from the frost ; how, feeble and crawling upon the ground, it exalts itself from the depths of humble vallies even to the summit of the Alps, and traverses the globe from north to south, from mountain to mountain, forming in its

* Short-lived, fleeting. The expression is taken from the insect called *ephemera*.

TRANSL.

way a thousand charming pieces of chequer-work, with its white flowers, and rose-coloured fruit, mingling with the plants of every climate ; how it has been able to scatter itself from the mountains of Cachemire to Archangel, and from the *Felices* in Norway to Kamschatka ; how, in a word, we find it in the two Americas, though an infinite number of animals are every where making war upon it, and though no gardener is at the trouble of sowing it again !

What a task, then, would it be, to write an history like this of all the species of vegetables scattered over the face of the whole earth ! If, from the vegetable, we make a transition to the animal kingdom, a field of incomparably greater extent presents itself. An intelligent naturalist, at Paris, some years ago, announced that he was in possession of more than thirty thousand distinct species of animals. I know not whether the king's magnificent cabinet may not contain more ; but I know well that his herbals contain only eighteen thousand plants, and that about six thousand are in a state of cultivation in the royal botanic garden. This number of animals, however, though so superior to that of vegetables, is a mere nothing in comparison with the number of distinct species that exist upon the globe.

What an undertaking, then, would it be to describe each of these beings with the skill of a *Reaumur* ! The life of one man of genius would be scarcely sufficient to compose the history of a few insects. However curious may be the memoirs transmitted to us, after the most careful research, respecting the manners and conformation of the animals best known to us, in vain do we still flatter ourselves with our having acquired a complete acquaintance. The principal requisite, in my opinion, is still wanting ; I mean the origin of
their

their friendships and their fends. In this consists, if I am not mistaken, the essence of their history. To this must be referred their instincts, their loves, their wars; the attire, the arms, and the very form which nature gives them. A moral sentiment seems to have determined their physical organization. I know not of any naturalist who has engaged in a research of this sort. Philosophers of name, unfaithful to the testimony of their reason and conscience, have dared to represent them as mere machines. They ascribe to them blind instincts which regulate all their actions, without passion, without will, without choice, and even without any degree of sensibility.

To contradict these opinions I shall have recourse not to those animals whose industry excite our admiration, such as the beaver, the bee, the ant, &c. I shall produce only one example, taken from the class of those which are most indocile, such as fishes, and shall select it from among a species governed by an instinct the most impetuous and the most stupid, which is gluttony.

THE SHARK

is a fish so voracious, that he will not only devour his own species, when pressed by hunger, but he swallows, without distinction, every thing that falls from a ship into the sea, cordage, pitch, wood, iron, nay, even knives. Nevertheless, I have been a frequent witness of his abstinence, in two remarkable cases: the one is, he never eats, however urged by famine, a small kind of fish, speckled with yellow and black, called the pilot-fish, which swims just before his snout to guide him to his prey, which he cannot see till he is close to it: for nature, as a counter-balance to the ferocity of this fish, has made him

almost blind. The other case is this: when you throw a dead fowl into the sea, the noise brings him to the spot; but, on discovering it to be a fowl, he immediately retires without devouring it. This has furnished the sailors with a proverb; *the shark flees from the feather*. It is impossible, in the first case, not to ascribe to him some portion of understanding, which represses his voracity in favor of his guides; and not to attribute, in the second, his aversion to feathered flesh, to that Universal Reason, which, destining him to live along the shallows, where cadaverous substances, of creatures perishing in the sea, fall, and are deposited, that he may not destroy the sea fowls which resort thither in great numbers, employed, like himself, in looking out for a livelihood, and in cleansing the shores from impurities.

Other philosophers, on the contrary, have ascribed the manners of animals, as those of men, to education; and their natural affections, as well as their animosities, to resemblance or dissimilitude of form. But if friendship is founded on similitude of form, how comes it that

THE HEN,

who walks in security, at the head of her brood, among the oxen and horses of a farm yard, though part of her family is sometimes accidentally crushed by the feet of those animals, collects her young with anxious inquietude at the sight of the hawk, a feathered animal, like herself, who appears in the air but as a black point, and whom, perhaps, she hardly, if ever, saw before? Why does

THE DOG

in the yard fall a barking, in the night time, at the mere smell of the fox, an animal which has a strong
resemblance

resemblance to himself? If habits of long standing could influence animals, as they do men, how has it been possible to render

THE OSTRICH

of the desert familiar to such a degree, that he has been made to carry children; whereas no skill has hitherto been able to tame

THE SWALLOW,

a bird which has, from time immemorial, built his nest in our houses.

These, however, are not the only instances in which false science misleads us. What a spectacle do our

CABINETS OF PRESERVED ANIMALS

present! To no purpose has the art of *Daubenton* endeavoured to keep up the appearance of life. Let industry do its utmost to preserve the form, their stiff and motionless attitude, their fixed and staring eyes, their bristly hair, all declare that death has stricken them. In these cabinets even beauty itself inspires horror; whereas the most homely objects are agreeable, when placed in the situation which nature has assigned them. I have been often highly diverted in the West Indies, at the sight of a crab on the sand, straining, with his claws, to break into a large cocoa-nut; or of a shaggy ape balancing himself on the summit of a tree, at the extremity of a *lianne*, that was loaded with pods and scarlet flowers.

In order to form a right judgment of the magnificent spectacle of

NATURE,

NATURE,

we must suffer every thing to remain in its place, and remain ourselves in that which nature has assigned to us. It is for the sake of our happiness that she has concealed from us the laws of her omnipotence. How can a being so feeble as man, embrace infinite space ! But she has brought within his reach what is at once useful and delightful to know ; namely, the emanations of her beneficence. In the view of uniting mankind by a reciprocal communication of knowledge, she has given to each of us, in particular, ignorance ; treasuring up science in common to render us necessary and interesting to each other.

The earth is covered over with vegetables and animals, the simple vocabulary of which no scholar, no academy, no one nation, will ever be able perfectly to acquire ; but it is to be presumed that the *human* race is acquainted with all their properties. In vain do enlightened nations boast that they that have gathered within themselves all the arts and all the sciences. It is to

SAVAGES,

to men utterly unknown, that we are indebted for the first observations, which are the sources of all science. It is neither to the polished Greeks nor Romans, but to nations which *we* denominate barbarous, that we owe the use of simples, of bread, of wine, of domestic animals, of cloths, of dyes for cloths, of metals, and for every thing most useful and most agreeable for human life. Modern Europe glories in her discoveries ; but

PRINTING,

Which ought, it is said, to immortalise the inventor,

tor, is to be ascribed to a person so obscure, that several cities of *Holland*, of *Germany*, nay, even of *China*, have claimed the discovery as their own.

GALILEO

would never have calculated the gravity of air, but for the observation of a fountain-player, who remarked that water could rise only to thirty-two feet in a forcing engine.

NEWTON

had never read the heavens, if some children, playing in Zealand with the glasses of a spectacle-maker, had not suggested the first idea of the telescopic cylinder. Our artillery would never have subjugated

AMERICA,

the New World, if a lazy monk had not happened to discover gun-powder; and whatever glory Spain may take to herself on account of their discovery of that vast portion of the globe, the savages of Asia had planted empires there long before the arrival of *Christopher Columbus*. What, indeed, had become of that great man himself, if the good and simple inhabitants whom he found there had not supplied him with provisions? Let then, academies accumulate machines, systems, books, elogiums; the chief praise of all is due to the ignorant, who furnished the first materials.

Advancing no higher claim, I presume to contribute my humble offering. It is the fruit of many years of application, which, amid long and bitter storms, have, occupied in these sweet researches, glided away as a single day. I earnestly wished, if I could not reach a boundary at which I might stop, at least to give to others the pleasures which I enjoyed along my way.

I shall, as I have already said, examine each object, not as separated from every thing else, but as connected

connected with the other parts of the creation. Nature herself indicates this order. She has adapted to plants the smell, the mouths, the lips, the tongues, the jaws, the teeth, the beaks, the stomach, the chylification, the secretions which ensue, in a word, the appetite, and the instinct of animals. It cannot, indeed, be affirmed, with truth, that every species of animal lives on one single species of plant; but any person may convince himself, by experiment, that each of them prefers some one to every other, when permitted to chuse. This preference is particularly remarkable, at the season when the production of their young engages attention: then they are determined in favor of that which provides them, at once, with nutriment, litter, and shelter, in the most perfect suitability to their situation. Thus the

GOLDFINCH

affects the thistle, whence he takes his name,* because he finds a rampart in its prickly leaves, food in its seeds, and materials for his nest in its down.

THE BIRD-FLY

of Florida prefers, for the same reasons, the *bigonia*: this is a climbing plant, which finds its way to the top of the highest trees, and which often entirely covers their trunks. He builds its nests in one of its leaves, which he rolls into the form of a cornet; he finds his food in its red flowers, resembling those of the fox-glove, the nectareous glands

* The goldfinch takes his name from the thistle, in the *French language*. In the English tongue he is only distinguished from the other *finches* by the epithet *gold*, or *golden*, in allusion to the yellow feathers upon his wing. In *French*, the thistle is *chardon*, and the goldfinch *chardonneret*.

of which he licks ; he plunges his little body into them, which appears in the heart of the flower like an emerald set in coral ; and he gets in sometimes so far, that he suffers himself to be surprised there and caught.

These relations of the animal to the vegetable parts of creation are so striking in

INSECTS

that, naturalists themselves, notwithstanding their prodigious number of isolated and indeterminable classes, have characterised some of them by the name of the plant on which they live : such are the *caterpillar* of the *tithymale*, and the *silk-worm* of the *mulberry*. But I do not believe that there is a single animal which deviates from this plan, not even the carnivorous. Though the life of these last appears to be, in some measure, grafted upon that of living creatures, there is not one of them but what makes use of some species of vegetable. We may observe this, not only in dogs, who feed upon the grass which bears their name, and in wolves, foxes, birds of prey, which eat the plants that bear their names ; but even in the

FISHES

of the sea, which are intire strangers, it would seem, to the earth. These are attracted, at first, to the banks, by insects, whose spoils they collect, which establishes between them and vegetables intermediate relations ; afterward by the plants themselves, for most of them come to spawn upon our coasts only when certain plants are in flower or in fruit. If these happen to be destroyed, the fishes visit us no longer.

Denis, governor of Canada, relates, in his History of North America, that the

COD

which used to the coasts of the Island of frequent Miscou disappeared in 1669, because, in the preceding year, the forests had been devoured by a conflagration. He remarks that the same cause had produced the same effect in different places.

We shall likewise speak of the finell and taste of

PLANTS.

It was from these man first acquired knowledge of their poisonous, medicinal, or nutritive qualities. Nay, the very

SOUNDS OF PLANTS

are not to be overlooked; for, when agitated by the winds, most of them emit sounds peculiar to themselves, and which produce harmonies, or contrasts; the most agreeable, with situations of the places where they usually grow. In India, the hollow canes of *bamboo*, which shade the banks of the rivers, imitate, as they rustle against each other, the gushing noise excited by the motion of a ship through the water; and the pods of the *cinnamon*, agitated by the winds upon the mountains' top, the tic-tac of a mill. The trembling leaves of the poplar convey to our ears, in the wood, the bubbling of a brook. The green meadows and calm forests, fanned by zephyrs, represent, in the hollow vallies and on declivities of rocks, the undulations and murmurs of waves breaking upon the sea-shore. The early inhabitants of the globe, struck with these mysterious sounds, imagined that they heard oracles pronounced from the trunk of the oak, and that Nymphs

Nymphs and Dryads inhabited, under their rugged bazcks, the mountains of Dodona.

THE CORRESPONDENCES

and mutual adaptation of each part of the plant to the other is so perceptible, that if you were to shew to a naturalist of ability any representation of a plant or animal which he had never seen, he could tell, from the harmony of its parts, whether it were a creature of the imagination or a copy after nature. One day, the students in botany, wishing to put to trial the knowledge of the celebrated *Bernard de Jussieu*, presented to him a plant which was not not in the collection of the Royal Garden, requesting him to indicate its *genus* and *species*. As soon as he cast his eyes upon it, he said, "This plant is artificially composed: you have taken the leaves of one, the stalk of another, and the flower of a third." This was the fact. They had, nevertheless, selected, with the greatest judgment, the parts of such as had the most apparent resemblance.

We can form no judgment of the works of nature, but in the place and at the time she is pleased to display them. All that we imagine beyond this, presents only contradiction, doubt, error, or absurdity. Let others extend the boundaries of our sciences, I shall consider myself to have rendered a more useful service to my fellow-creatures, if I am enabled to fix the terminations of our ignorance. Our illumination, like our virtue, consists in descending, and our force in becoming sensible of our weakness. If I do not pursue the road which nature has reserved for herself, I shall at least walk in that which man ought to take. It is the only one which presents him easy observations, useful discoveries, enjoyments of every description, without

out instruments, without a cabinet, without metaphysics, and without a system.

In order to convince ourselves of the beauty which results from a combination of objects, each in its proper place, let us form, according to the plan we have proposed,

A LITTLE GROUPE

of the most common sites, vegetables, and animals, of our climates. Let us suppose a soil the most obdurate, a craggy protuberance on the coast, where a river disgorges itself into the ocean, presenting a steep toward the sea, and a gentle declivity toward the land: that, on the side turned toward the sea, the billows cover with foam rocks clothed with sea-weed, fucuses, alga-marinas, of all colours and of all forms, green, brown, purple, in tufts and garlands, as I have seen them on the coast of Normandy, affixed to rocks of white marl, which the sea detaches from the main shore. Let us farther suppose that, on the side of the river, we see on the yellow sand a scanty verdure, mixed with a little trefoil here and there, and here and there a sprig of marine wormwood. Let us introduce some willows, not like those which grow in our meadows, but the native crop of the soil, and similar to those which are to be seen on the banks of the Spree, in the vicinity of Berlin, with broad bushy tops, and rising to the height of more than fifty feet. Let us not forget, in this arrangement, that agreeable harmony which arises from the mixture of different ages, which is so desirable in every species of aggregation, but especially in that of vegetables. Let us observe of these willows, so smooth and full of moisture, some pushing their young branches into the air, and others of an aged form, with pendant top and hollow trunk.

Let.

Let us add to these their attendant plants, such as the green mosses, and gilded *lichens*, which marble their grey bark, and some of their convolvuluses, which love to climb up their trunks, and to embellish the branches, which display no flowers of their own, with their heart shaped leaves, and bell flowers as white as snow. Let us now put the natural inhabitants of the willow and its plants: their butterflies, their flies, their beetles, and other insects, together with the feathered animals which make war upon them, such as the water-hen, polished like burnished steel, which catches them in the air; the wagtail which pursues them on the land, making the movement whence he derives his name, and the king's-fisher, who hunts for them along the surface of the water—add these, and you will see a multitude of agreeable harmonies arising out of a single species of tree.

The picture, however, is still incomplete. To the willow let us oppose the alder, which likewise affects the banks of the river, and which, by its form, resembling that of a long tower; its broad foliage, its dusky verdure, its fleshy roots, formed like cords running along the banks, and binding together the soil, forms a complete contrast with the extended mass, the light foliage, the silver verdure, and the trundling roots of the willow. Add to this, the individuals of the alder, of different ages, rising like so many verdant obelisks, with their parasite, or humble dependant plants—such as the maiden-hair, spreading into stars of verdure over the humid trunk, the long harts-tongue, hanging from the boughs down to the ground, and the other accessories of insects, fowls, and even quadrupeds, which, themselves form contrasts,—as to form, colour, gait and instinct, with those of the willow; and we shall have a delightful assemblage of vegetables

tables and animals, composed of two trees only, together with their accompaniments. If we

ILLUMINE OUR LITTLE PLANTATION

with the first rays of morning, we shall behold at once, shades deep, and shades transparent, diffused over the verdure; a dark and a silvered verdure intersect each other, on the azure of the heavens, and their soft reflexes blended together, moving on the bosom of the waters. Let us farther imagine, what neither poetry nor painting can give; the odour of the plants, and even the smell of the sea; the rustling of leaves, the humming of insects, the matin song of the birds, the hollow murmuring noise, intermixed with silence, of billows breaking upon the shore; and the repetition of all these sounds, repercussed by the distant echos, which losing themselves in the sea, resemble the voices of the Nereids:—Ah! if ever love, or philosophy, should lead you such a solitude, you will find it a sweeter asylum than the palaces of kings possess.

Would you excite other sensations? Would you hear passions and sentiments breathed from the bosom of the rocks? Amid the groupe, let the tomb of a virtuous and unfortunate man arise, whereon these words may be read:

Here rests J. J. ROUSSEAU.

will you encrease the effect, the pathos of this picture, without doing violence, however, to nature, by the impropriety of the addition? Place at a distance the time, the scene, the monument. Let the island be the island *Lemnos*; the trees of our thicket, laurels and wild olives; and this tomb, the tomb of

PHILOCTETES.

Look

Look at the grotto in which this great man lived, abandoned by the Greeks, whom he had served. His wooden pot; the tattered garments with which he was cloathed; the bow and the arrows of Hercules, which, in his hands, had subdued so many monsters, and with which he, at last, wounded himself: look at these, and you will be impressed with two powerful sensations at once: the one, physical, which increases as you approach the works of nature; because their beauty discloses itself only to the eye which examines it: the other, moral, which grows upon you as you withdraw from the monuments of virtue: because to do good to men, and to be beyond their reach, has a resemblance to the DEITY.

What would it be then, if we were to cast only a glance over the general harmonies of this globe! To speak merely of those which are best known to us; behold how the

S U N

constantly surrounds *one* half of the earth with his rays, while night covers the earth with her shade. How many contrasts, and concords result from the ever changing opposition of these! There is not a single point in the two hemispheres where there does not alternately appear a dawn, a twilight, a morning, a noon; a fiery western sky; a night, sometimes studded with stars, sometimes obscured by clouds. Before the sun, the seasons walk hand in hand, like the hours of day! Spring, crowned with flowers precedes his car; Summer surrounds it with her harvests; and Autumn follows it with her horn filled with fruits. Winter and night retiring to the *poles*, to the boundaries of the world; vainly endeavour, even there, to limit his magnificent course! Vainly do they raise out of the bosoms of the south and northern poles; continents of ice, with

their valleys, their mountains, and their *aurora borealis*. The father of day overturns with his shafts of fire, these fantastic fabrications; and, without descending from his throne, takes again the empire of the universe. Nothing escapes his fruitful heat. From the bosom of the ocean he raises into the air the rivers that afterwards flow through the two worlds. * He gives commandments to the

WINDS,

to distribute them over islands and continents. These invisible children of the air, carry them from place to place in a thousand capricious forms. Sometimes they are spread in the heavens like veils of gold, and streamers of silk; sometimes they are rolled up in the form of frightful dragons, and roaring lions, that cast forth lightnings and thunders. Again, the winds pour them out on the mountains in as many different forms; in dews, in rains, in hail, in snow, in impetuous torrents. However irregular the mode of performing their services may appear, every part of the earth receives from them neither more nor less than its accustomed portion of water. Every river fills his urn, and every naiad her shell. In the progress of the winds they impress on the liquid plains of the sea, the variety of their characters. Some scarcely ruffle the surface of the waves; others swell them into billows of azure; others drive them from the bottom with

* The heat of the sun causes water to rise into the air, where it forms clouds. Nothing can be more easily understood than this part of the economy of nature, since it is exactly similar to steam, or vapour, rising from warm water. The winds disperse these clouds over islands and continents, where, descending in rains, they supply 'the rivers that flow through the two worlds.' Geographers call the two *Americas* the *new world*, and Europe, Asia, and Africa, the *old world*.

roaring noises, and cover high promontories with their foam. Every place possesses

HARMONIES,

that are peculiarly its own, and every place presents them in rotation. Run over any meridian, or parallel that you please; you will find in it mountains of ice, and mountains of fire; plains of every kind of level, and hills of every curve; islands of all forms, and rivers of all currents: some spouting up, as if they issued from the centre of the earth; others precipitating themselves, as if they fell from the clouds. All this while, our globe, agitated with such a variety of convulsive movements, and loaded with burdens, *apparently*, so irregular, advances in a steady and unalterable course through the immensity of the heavens.

Beauties of another order decorate its architecture, and render it habitable to sensible beings. A girdle of

PALM-TREES,

on which grow the date and the cocoa, surrounds it between the burning tropics; and forests of mossy firs begird it under the polar circles. Other vegetables extend, like rays, from south to north, and having reached a certain latitude expire. The

BANANA

advances from the line to the southern shores of the Mediterranean. The

ORANGE

crosses that sea, and embellishes with its golden fruit

fruit, the southern extremities of Europe. The most necessary plants, such as

CORN,

penetrate the farthest, and, strong from their weakness, extend, in the shelter of the vallies, from the Banks of the Ganges, to the shores of the Frozen Ocean. Others more hardy, take their departure from the rude climates of the north, advance over the heights of Taurus, and make their way, under favor of the snows, even to the bosom of the torrid zone.

THE FIR AND THE CEDAR

rise upon the mountains of Arabia, and of the kingdom of Cachemir, and view at their feet the scorched plains of Aden and Lahor, where the date and the sugar-cane are gathered. Other trees, equally averse to heat and to cold, have their centre in the temperate zones. The

VINE

languishes in Germany and Senegal. The apple, the tree of (France) my own country, never saw the sun perpendicularly over its head, nor describing round it the complete circle of the heavens, to ripen its beautiful fruits.* But every soil has its own flowers and its own fruits. The rocks, the morasses, the mire, the sand, have each vegetables peculiar to itself. The very shallows of the sea are fertile. The cocoa thrives only on the shore and suspends its milky fruit over the billows of the briny deep. Other plants are adapted to the winds, to the seasons, to the hours of the day, with such ex-

* For this reason apples are red only on one side.

act precision that, *Linnaeus* formed of them almahacks and time-pieces. Who can describe the infinite variety of their figure? What cradles, arches, avenues, pyramids of verdure, loaded with fruits, present the most enchanting habitations! What happy nations live under their peaceful coverts! What delicious banquets are there prepared! Nothing of them is lost. The quadrupeds eat the tender leaves, the birds the seeds, other animals the roots and the rinds. The insects feed upon the offal: their infinite legions are armed with all sorts of instruments for collecting it. The

BEES

have hair, for picking up the fine powder of their flowers: the

FLY

is provided with a pump (a trunk or *proboscis*, somewhat like that of the elephant) for sucking out the sap: the

WORM

has an auger, a wimble, a file, to separate the solid parts; and the

ANT

has pincers for carrying off the crumbs.

There are other tribes of creatures who pay no such attention to vegetables, and are adapted to the elements, to day, to night, to tempests, and to different parts of the globe. The

EAGLE

trusts her nest to the rock which loses itself in the clouds; the

C

OSTRICH

OSTRICH

to the parched sands of the desert: the rose-coloured

FLAMINGO

to the marshes of the southern ocean. The white bird of the tropic, and the black frigate, take pleasure in traversing together the vast expanse of the ocean, to see from the heights of the air the fleets of India under their wings, and to circumscribe the globe from east to west, disputing rapidity even with the course of the sun. In the same latitudes

THE TURTLE DOVE AND THE PERROQUET,

less daring, travel only from isle to isle, leading their young ones in their train, and picking up in the forests the grains of the spiceries which they brush off as they pass from branch to branch. While fowls of this description preserve an equal temperature under the same parallels, others find it in the track of the same meridian. Long triangles of wild-geese, and of

SWANS,

go and come every year from south to north, stop only at the hoary limits of winter, pass without admiration over the populous cities of Europe, disdaining their fruitful fields, presenting stripes of green corn in the midst of the snows;—so far preferable to abundance does liberty appear, even to animals.

While these pursue winter, legions of heavy

QUAILS

cross

cross the sea, and go to the south, in quest of summer's heat. Toward the end of September, they avail themselves of a northerly wind, to take their leave of Europe, and flapping one wing, and presenting the other to the gale, half sail, half oar, they graze the billows of the Mediterranean with their fattened rump, and descend on the sands of Africa, to serve for nourishment to the famished inhabitants of Zara. There are animals which travel only by night. Millions of

CRABS,

in the Antilles, descend from the mountains by the light of the moon, clattering their claws, and present to the carraibs, on the sterile shores of their islands, innumerable shells, filled with exquisite marrow. At other seasons, on the contrary, the

TORTOISE

quits the sea, and lands upon the same shores, to deposit her eggs in their barren sands.

THE VERY ICES OF THE POLES ARE INHABITED.

We find in their seas, and under their floating promontories of ice, the black

WHALE,

loaded with more oil than a whole plantation of olives could produce. Foxes, clothed in precious furs, find the means of living on shores abandoned by the sun; herds of rein-deer there scratch up the snow in search of moss, and advance, braying, into those desolate regions of night, by the faint

and unsteady light of the *Aurora Borealis*. By an admirable providence, the most barren places present to mankind, in the greatest abundance, provisions, clothing, lamps, and fuel, ready made to his hands. What a sweet sight it would be to behold

THE HUMAN RACE

collecting all these various blessings, and communicating them to each other, in peace, from one climate to another! Every winter we wait, with anxiety, for the swallow and the nightingale to announce to us the return of fine days. It would be much more touching to see distant people arrive with the spring upon our shores;—not with the noise of artillery, like modern Europeans; but with the sound of flutes and hautboys, like the ancient navigators in the first ages of the world! We should see the black Indians of southern Asia coming up, as heretofore, their vast rivers, in leathern canoes, to penetrate, by the waters of Petzora, to extremities of the north, and displaying, upon the shores of the frozen sea, the riches of Ganges. We should see the copper-coloured Indians of America, in their hollowed trunks of trees traversing the long chain of the Antilles, and from island to island, from shore to shore, carrying, perhaps even to our own continent, their gold and their emeralds. Long caravans of Arabs, mounted on camels and oxen, following the course of the sun, would travel from pasture to pasture, recalling the innocent and happy life of the ancient patriarchs.

WINTER

itself would be no interruption to the intercourse of nations. The Laplander, covered with warm fur, would arrive, under favor of the snow, in his sledge,

fledge, drawn by rein-deer, and expose for sale in our markets the fable skins of Siberia. If men lived peaceably, every sea would be navigated, every land would be cultivated, all their productions would be gathered together. How interesting would it be to hear the adventures of these foreign travellers, attracted to us by the amiableness of our manners! They would not be slow in returning our hospitality, by communicating to us the secret virtues of their plants, of their industry; and of their traditions, which they for ever conceal from our ambitious commerce.

It is among the members of the vast family of mankind that the fragments of its history are scattered. How interesting would it be to learn the story of our ancient separation, the motives which induced each tribe to seek a separate habitation, on an unknown globe, and to traverse, as chance directed, mountains which presented no path, and rivers which had not yet received a name!

What pictures would be presented to us in the descriptions of those countries, decorated with magnificent pomp, as they proceeded from the hands of nature; but wild, and unadapted to the necessities of man, destitute of experience! They would tell us how astonished their forefathers were, at the sight of the new plants which every new climate exhibited to their view, and the trials which they made of them as means of subsistence; how they were aided, no doubt, in their necessitous circumstances, and in their industry, by some celestial intelligence, who commiserated their distress; how they gradually formed an establishment; what was the origin of their laws, of their customs, and of their religions.

What acts of virtue, and what generous loves, have enobled the

DESERTS,

and are unknown to our conceitedness! We flatter ourselves, because a few anecdotes have been picked up at random by travellers, that we have got full evidence of the history of foreign nations; but this is much the same as if we were to compose our own history from the tales of our mariners, or the artificial representations of a courtier, amid the jealousies of war, or the corruptions of commerce. The knowledge and the sentiments of a nation are not deposited in books. They repose in the heads and hearts of its individuals, if, indeed, there be such a thing on earth as a secure asylum for truth. We have already employed ourselves sufficiently in passing judgment upon them; it would be more useful to us if we were to submit to be judged by them in our turn, and to profit by their expressions of astonishment, at sight of our customs, of our sciences, and of our arts!

People are apt to imagine that every one is miserable, and out of the world, who do not live as they do: but it is those who live far from *nature* that live out of the world. They would find thee,

NATURE,

O eternal beauty! thee, always ancient and always new! O life, pure and happy, of all those who truly live, if they sought thee, Nature, only within themselves! Wert thou, indeed, a sterile mass of gold, or a victorious prince, who may not be alive to-morrow, the world would then perceive thee, and believe thee capable of bestowing some pleasure upon them! The vanity of thy substance would then employ their vanity. Thou wouldst be an object proportioned to their timid and groveling thoughts. But, because thou art too much within them—

themselves, where they never enter, and too magnificent in thy appearance, diffusing thyself through infinite space, thou remainest to them an unknown God! In losing themselves they have lost thee! The order, and even the beauty, with which thou hast invested all thy creatures, to serve as so many steps by which man may raise himself to thee, are transformed into a veil which disfigures thee to their sickly eyes. Men have sight but for shadows. The light dazzles them. That which is nothing is to them every thing, and that which is every thing, is with them for nothing. Nevertheless, he who never saw thee, has never seen any thing; he who has no relish for thee is an utter stranger to true pleasure; he is as if he were not, and his whole life is only an unhappy dream.

I, myself, O my God, misled by the prejudices of a faulty education, pursued a vain felicity, in systems of science, in arms, in the favour of the great, sometimes in frivolous and dangerous pleasures. In all these agitations I was running after misfortune, while happiness was within my reach. When I was at a distance from my native land, I sighed for joys which it contained not for me; and, nevertheless, thou wert bestowing on me blessings innumerable, which thou hast spread over the whole earth, which is the country of mankind. I disquieted myself with the thought that I had no powerful protector, that I belonged to no domineering party; and by thee I have been protected amid a thousand dangers, in which they have afforded me no assistance. It grieved me to think of living solitary, unnoticed, unregarded; and thou hast vouchsafed to teach me that solitude is far preferable to an abode in palaces, and liberty to grandeur!

I never ceased to be happy, but when I ceased to trust in thee. O, my God, give to these labours of a man, I do not say the duration or the spirit of

life, but the freshness of the least of *thy* works ! Let *their* divine graces pass in my writings, and may they bring back a corrupted age unto thee, as I myself have been brought back ! Opposed to thee, all power is weakness ; supported by thee, weakness becomes powerful. When the rude northern blasts have ravaged the earth, thou callest the feeblest of winds ; at the sound of thy voice, zephyr breathes, the verdure revives, the gentle primrose, and the humble violet, cover the bosom of the dreary rocks with gold and purple !

END OF THE FIRST STUDY.

SECOND

SECOND STUDY.

BENEFICENCE OF NATURE.

THE greater part of the inhabitants of polished nations, look on nature with indifference. They are surrounded by her works, and they admire only human grandeur. But what is there in the history of man, that render it half so interesting as that of nature? The history of man has to boast only of vain objects of glory, of uncertain opinions, of bloody victories, or at most, of useless labours. If ever nature is mentioned the n it, we are called upon to hear of the ravages she has committed, and to place those misfortunes to her account which are almost always the results of our own imprudence. What care, on the contrary, does not this our common mother take of our happiness! she has spread her blessings from one pole to another, in order to encourage the union of mankind by the reciprocal communication of her productions: she is perpetually calling us back to the universal laws of justice and humanity, notwithstanding the prejudices that separate mankind, by causing our evils to come from the hands of our conquerors, whom we so highly extol, and our pleasures from the labours of the wretched and oppressed, to whom we scarcely vouchsafe our pity.

When the princes of Europe issued forth to desolate
Asia

Asia, they brought back to us the pestilence, the leprosy, and the small-pox ; but nature shewed to a *Dervise*

THE COFFEE PLANT

in the mountains of Yemen, and produced at the same time, our plagues from the croisades, and our delights of the cup from a *Mahometan monk*. The successors of us princes * subjugated America ; and have bestowed on us, by that achievement, an inexhaustible succession of wars, and of diseases. While these were murdering the inhabitants with their cannon, a Caraib invited the Sailors, in token of peace, to smoke in his *calumet* ; the perfume of tobacco dissipated their cares and they spread the use of it over all the Earth : thus while the miseries of the two worlds came from artillery, which kings call their *last argument*, the consolation of civilized people came from the pipe of a savage !

To whom do we owe the use of

SUGAR, CHOCOLATE,

and so many salutary medicines ? to naked Indians, to poor peasants, to miserable negros ! the spade of slaves has done more good, than the sword of conquerors has done mischief ! nevertheless, in which of our public squares, are the statues of our obscure benefactors ? our historians do not condescend to preserve even their names. We need not, however, go so far in quest of proofs of our obligations to Nature, is it not to the study of her laws that London and Paris owe their multiplied illumination, collected from every quarter of the globe ?

* Alluding particularly to the Spaniards, and their crimes, in South America.

Where

STUDY I.

Where is the time when our

FOREFATHERS

leaped for joy at finding a wild plumb-tree, on the banks of the Loire ; or at catching some roe in the chace, on the vast plains of Normandy ! Our fields now clothed with harvests, our orchards and flocks, did not then furnish them with subsistence. Our ancestors wandered up and down, living on the precarious supplies of hunting, and not daring to trust to nature. Her simplest phenomena filled them with terror. They trembled at the sight of an eclipse, of an *ignis fatuus** at a branch of mistletoe of the oak.

I will suppose that, a

PHILOSOPHER,

such as *Newton*, had then exhibited to them the spectacle of some of our natural sciences, and had shewn them with the microscope. forests in moss, mountains in grains of sand, thousands of animals in drops of water, and all the wonders of *Nature* ; who, in *descending toward minuteness*, multiplies the contrivances of her wisdom, while the human eye becomes incapable of perceiving the boundary : let me go on to suppose that afterward discovering to them in

THE HEAVENS

an *ascent of vastness* equally infinite, he had shewn them among the planets, scarcely perceptible to the naked eye, worlds much larger than ours : *Saturn*, three hundred millions of leagues distant ; among the

* A luminous vapour, sometimes seen in marshy places vulgarly called *will of the wisp*.

stars, still farther off, had shewn them suns, which probably illuminate other worlds: in the whiteness of the *milky way*, stars, that are suns, innumerable, scattered about in the heavens as grains of dust on the earth, while man is ignorant whether all this may not be the mere skirts or threshold of God's creation! let me suppose that he had shown them these things, and consider with what transport they would have viewed a sight which we at this day, see with indifference!

But I would rather suppose that, without the magic of our sciences, a man like

FENELON,

had presented himself, arrayed in his virtue, and thus addressed the *Druids* ;* “ You frighten yourselves, with the terrors which you instil into the people. God is righteous; he conveys to the wicked terrible opinions, which recoil upon those who spread them abroad: but he speaks to all men in the blessings which he gives: your religion would govern men by fear; mine, leads them with love, and imitates his sun in the heavens, which he causes to shine upon the good, and upon the evil.”

I will finally suppose that, after this, he had distributed among them the simple presents of nature, till then unknown to them; sheaves of corn, slips of the vine, sheep covered with fleeces; oh! what would have been the gratitude of our forefathers! they would have fled with terror perhaps, from the inventor of the telescope, mistaking him for a spirit: but, certainly they would have worshipped the author of *Telemachus*!

These nevertheless, are a very small part of the nu-

* The priests of ancient Gaul, or France.

merous blessings for which their rich descendants stand indebted to nature. In truth, the whole world is employed to procure them pleasures. England, Spain, Italy, the Archipelago, Hungary, all southern Europe, is adding, every year, wools to their wools, wines to their wines, silks to their silks. Asia gives them diamonds, spices, muslins, chintzes, and porcelaine; America, the gold and silver of her mountains, the emeralds of her rivers, the dyes of her forests, the cochineal, the sugar-cane, and the cocoa of her burning plains, for which their hands did not labour; Africa sends her ivory, her gold, her very children, which serve them as beasts of burden, all over the earth.

There is not a spot of the earth but what furnishes them some article of enjoyment. The gulfs of the ocean provides them pearls; its shallows, ambergris; its icy promontories, furs. At home, they have reduced the rivers and mountains to vassalage, in order to reserve to themselves peculiar rights, in fisheries and chases. But there was no occasion to put themselves to so much expence. The sands of Africa, where they have no game-keeper, send them quails in clouds, and other birds of passage, which cross the sea in Spring, to cover their tables in Autumn. The northern pole, where there are no cruising vessels to protect possessions, pours every Summer on their shores, legions of mackerel, of cod, and of turbot, fattened during its long nights.

Not only the fishes and the birds, but the very

TREES

themselves, change for them their climate. Their orchards were formerly transplanted from Asia, and now, their parks come from America. Instead of the chefnut and walnut, which surrounded the farms
of

of their vassals, in the rustic domains of their ancestors, the ebony, the forb-apple of Canada, the great chestnut of India, the magnolium, the tulipfera, incircle their villas with the groves of the new world, and, soon, of its solitudes. They have made the jasmin come to them from Arabia, the orange from China, the anana * from Brazil—and their atmosphere is filled with the perfumes of every region of the torrid zone. They need no suns: they form climates as they please. In their hot-houses they can give to foreign plants the heats of Syria, even at the very season that peasants are perishing with alpine frosts in their thatched-roofed hovels.

None of the productions of nature are denied them. What they cannot procure alive, they have when dead. The insects, birds, shell-fish, animals—nay, the very soil of the most distant lands, enrich their cabinets. Painting and engraving present them with the prospect, and procure them the enjoyment of the Glaciers of Switzerland, during the burning heat of the dog-days; and of the spring of the Canary islands in the middle of winter. The intrepid mariner brings them, from regions into which the arts dare not penetrate, journals of voyages, still more interesting than the productions of the pencil; and increases the silence, the tranquillity, the security of their nights: sometimes by a recital of the horrible tempests of Cape Horn; sometimes, by that of the dances of the happy islanders of the south sea.

Obscure scholars, by labors which nothing can recompence, have for them procured the knowledge of the sublime

GENIUSES,

* The Pine-apple.

who

who were ornaments of the world in times nearer to its creation: Orpheus, Zoroaster, Æsop, Lokman, David, Solomon, Confucius, and a multitude of others, unknown to antiquity itself. It is no more for the Greeks, it is for them that Homer still sings of heroes, and of gods; and that Virgil warbles the notes of the latin flute, which enchanted the court of Augustus, and called back to it the love of country, and of nature. It is for them that Horace, Pope, Addison, La Fontaine, Gesner, have smoothed the rough paths of wisdom, and have even rendered them more accessible, and more lovely than the treacherous precipices of folly.

A multitude of poets and historians of all nations: Sophocles, Euripides, Corneille, Racine, Shakspeare, Tasso, Zenophon, Tacitus, Plutarch, Suetonius, introduce them into the very closets of those terrible potentates who bruised, with a sceptre of iron, the head of the nations, whose happiness was entrusted to their care, leading them to rejoice in their peaceful destiny, and to hope for a better still, under the reign of another Antoninus. Those vast geniuses of all times, and of all places, celebrating, independent of each other, the immortal lustre of virtue, and the providence of heaven in the punishment of vice, add the sanction of their sublime intelligence to the universal feeling of mankind, and multiply in one favour a thousand and a thousand times—the hopes of another life, more lasting and more happy!

Seems it not that, a chorus of praise ought to ascend day and night from the roofs of our dwellings to the Author of nature? Never did ancient King of Asia, Susa, or Ecbatana, possess so many enjoyments as our common citizens do in Paris. Nevertheless, every day, these monarchs worshipped the gods. They would engage in no enterprise without consulting the
the

the Gods; nor even sit down to table before they had poured out libations, in religious acknowledgment.

END OF THE SECOND STUDY.

THIRD STUDY.

GEOGRAPHICAL.

LET us consider the form of the bason of the
OCEAN.

Two principal currents cross it : the one from east to west, the other from north to south. The first, coming from the south pole, puts in motion the seas of India, and, directed by the eastern coast of the old continent, runs from east to west, and from west to east, in the course of the same year ; forming in India what is called the *Monsoons*. We may remark that, all the bays, creeks, and mediterraneans † of Southern Asia, such as the Gulphs of Siam and Bengal, the Persian Gulph, the Red Sea, and a great many others, are directed relatively to this current, so as not to be stemmed by it.

In like manner, the second current, issuing from the north pole, gives an opposite movement to our ocean, and inclosed between the continent of America and our own, that is, Europe, proceeds from north to south, and returns from south to north in the same year, forming like that of India, real *Monsoons*, though little observed by navigators. All the bays and mediterraneans of Europe—as the Baltic,

† Seas surrounded by land.

the Channel, the Bay of Biscay, the Mediterranean, usually so called; and all those on the eastern coast of America—as the Bay of Baffin, Hudson's Bay, the Gulf of Mexico, and many others which might be mentioned, are directed relatively to this current, east and west.

It is because of the calmness of

BAYS,

resulting from their situations with respect to the currents, that, so many vessels run thither in quest of anchorage; and it is for this reason, also, that, nature has placed in these the mouths of most rivers, as we before observed, that their waters might be discharged into the ocean without repercussion by its currents. She has employed the same precautions in favor of even the smallest streams that empty themselves into the sea. There is not an experienced seaman who does not know that, there is scarcely a creek but what has its little rivulet. But for the wisdom apparent in these dispositions, the streams, destined to water the earth, must frequently inundate it.

Nature employs still other means for securing the course of rivers and especially for protecting their discharges into the sea. The chief of these are

ISLANDS.

Islands present to the rivers channels of different directions: so that if the winds, or the currents of the ocean should block up one of their outlets, the waters may flow through another. It may be remarked that, she has multiplied islands at the mouths of rivers, the most exposed to these two inconveniencies: such, for example, as
that

that of the Amazon, which is for ever attacked by the east wind, and situated on one of the most prominent parts of America. There, they are so many in number, and form with each other such different courses that, one of their openings points north-east, and another south-east, and from the first to the last, the distance is upwards of one hundred leagues.

Fluviatic, or river, islands are not formed, as is commonly believed, by substances washed down by rivers, and amassed: they are, on the contrary, for the most part, very much elevated above the level of these rivers, and many among them contain rivers and mountains of their own. These elevated islands are, besides, frequently found at the confluence, or union, of a smaller and greater river. They serve to facilitate their communication, and to open a double passage to the current of the rivulet. Whenever you see islands in the channel of a great river, you may be assured that there is some lateral inferior river, or rivulet, in the neighbourhood..

There are, in truth, many of these confluent rivulets which have been dried up by the imprudent labours of men; but you will always find, opposite to the islands which divided their confluence, a correspondent valley, wherein their ancient channel may be traced. There are likewise some of these islands in the midst of the course of the rivers, in places exposed to the winds. I shall observe, by the way, that we err extremely respecting the intentions of nature, in re-uniting the islands of a river to the adjoining continent; for its waters, in this case, can only flow through one channel, and when the winds happen to blow contrary to the current, they can escape neither to the right nor to the left: they swell, they overflow, they inundate the fields, throw down the bridges, and occasion most of the ravages which are now so frequent in our cities.

It

It is not then bays, or gulfs, that we find at the extremities of the currents of the ocean; it is, on the contrary, islands. At the extremity of the great eastern current of the Indian ocean, is placed island of Madagascar, which protects Africa against its violence. The islands of the Terra del Fuego defend, in the same manner, the southern extremity of America, at the confluence of the eastern and western currents of the south seas. The numerous Archipelagos of the Indian and southern oceans, are found about the line, where the two general currents of the north and south seas meet. It is with islands, too, that nature protects the opening of bays, and mediterraneans.

ENGLAND, SCOTLAND, AND IRELAND

cover that of the Baltic; the islands of Welcome and Good Fortune, Hudson's bay; the island of St. Laurence, the entrance of the gulf of that name; the chain of the Antilles, the gulf of Mexico; the isles of Japan* cover the double gulf, formed by the peninsula of Gorée, with the neighbouring countries. All currents bear upon islands. Most of these are, for this reason, noted for their high seas, and their raging winds: such are the Azores, the Bermudas, the island of Tristan, of Acunhah, &c. It is not that they contain within themselves the causes of these, but that they are placed at the focuses of the revolutions of the Ocean, and even of the Atmosphere, for the purpose of weakening their effects. They are in positions nearly similar to those of the capes, which are all celebrated for the violent tempests

* Japan should be called Gep-uen: *the birth of the Sun*: so named by the opposite people who, seeing the Sun rise every morning among these islands, believed it really came from them.

which

which beat upon them : as Cape Finisterre, at the extremity of Europe ; the Cape of Good-Hope, at that of Africa ; and Cape Horn, at that of America. It is from this that the sea proverb, is derived, *double the Cape* : that is, to surmount some great difficulty. The ocean, accordingly, instead of bearing upon the retiring parts of the Continent, is directed upon those which are most prominent : and it must soon have destroyed these, had not nature fortified them in an admirable manner.

The western coast of Africa is defended by a long bank of sand, on which the billows of the Atlantic Ocean are perpetually breaking. Brasil, along the whole extent of its coasts, opposes to the continual winds from the east, and to the current of the sea, a prodigious rampart of rocks, more than a thousand leagues long, twenty paces broad, at the summit, and of an unknown thickness at the base. This bank is at a musquet-shot distance from the beach. The sea entirely covers it at high water, and on the retreating of the tide it presents itself with the elevation of a peak. This dike is composed of one piece lengthwise, as has been ascertained by repeated trials ; and it would be impossible for a vessel to get into Brasil, had not nature made openings in several places, through which our vessels go in and out.

Go from the south to the north, you will always find equivalent precautions. The coast of Norway is defended nearly in the same manner as that of Brasil. Pontoppidan tells us that, this coast, which is nearly three hundred leagues in length, is, for the most part, steep, angular, and over-hanging ; so that the sea, in many places, has a depth of no less than three hundred fathoms close in shore. This has not prevented nature from protecting these coasts by a great number of isles, great and small. " By such a rampart," says this author, " which consists of

of perhaps a million or more of massy stone pillars, founded in the very depth of the sea, the chapters of which are only a few fathoms above the surface, all Norway is defended to the west, as well against the enemy as against the ocean." Behind these species of breaker are found some harbours on the coast, of a similarly wonderful construction. But, as there is frequently danger, adds Pontoppidan, of ships being driven ashore before they can get into port, from the winds and currents, which are very violent in the straits of these rocks and isles, and from the difficulty of anchoring in so great depth, government has caused several hundreds of strong iron rings to be fastened in the rocks, more than two fathoms above water, by which the vessels may be moored.

Nature has infinitely varied these means of protection, especially in the islands, which themselves protect the continent. She has surrounded the Isle of France, for example, with a bank of madrepores, which opens only at the place where the rivers of that island empty themselves into the sea. Other islands, as several of the Antilles, were defended by forests of mangliers, which grow in the sea itself, and break the violence of the waves by yielding to their motion. It is, perhaps, to the destruction of these vegetable fortifications, that we ought to attribute the irruptions of the sea, now so frequent in several islands, particularly that of Formosa. There are others which consist of pure rock, rising out of the sea like huge moles; such as the Maritimo in the Mediterranean. Others, volcanic, like the Isle of Fuego, one of the Cape-de-Verd islands, and several similar in the South Sea, rise like pyramids with fiery summits, and serve for light-houses to mariners, by their flame in the night time, and by their smoke by day.

THE MALDIVIA ISLANDS

are protected against the ocean by the most astonishing precautions. In truth, they are also more exposed than many others, being situated in the great current of the Indian Ocean, of which mention has been already made, and which passes and repasses twice a year. They are, besides, so low that they are almost on a level with the water; and they are so small and so numerous, that they have been computed at twelve thousand: and several are so near to each other, that it is possible to leap over the channels from one to another. Nature has first united them in clusters or Archipelagos, separated from each other by deep channels, which go from east to west, and which present many passages to the general current of the Indian Ocean. These clusters are thirteen in number, and extend, in a row, from the eighth degree of northern to the fourth degree of southern latitude, which gives them a length of three hundred of our leagues of twenty-five to a degree.

But let us hear the description of their architecture from the interesting and unfortunate Francis Pyrard who there passed the prime of his life in slavery; for he has left us the best description which we have of these islands, as if it were necessary that, in every case, those things which are most worthy of the esteem of mankind should be the fruit of some misfortune.

"It is wonderful," he says, "to see each of these clusters encompassed round and round with a great bank of stone, such as no human art can pretend to equal, in securing a spot of ground within its walls. These clusters are all roundish or oval, and have each a circumference of about thirty leagues: some, rather more, others, rather less, and are all in a series, and end to end, without any contact

contact whatever. There are, between every two channels of the sea, some broad, others very narrow. Being in the center of a cluster, you see all around that great bank of stone, which, as I have said, encompasses and defends the isles against the impetuosity of the ocean. But it is truly terrible, even to the boldest, to approach this bulwark, and to behold the billows coming from a distance, to burst with fury on every side; for then I assure you, as a thing which I have seen an infinity of times, the perturbation or bubbling over exceeds the size of a house, and is whiter than cotton; so that you see yourself surrounded by a wall of extreme whiteness, especially when the sea is high."

Pyrard observes, beside, that most of the isles that are inclosed in these subdivisions are each surrounded by a particular bank, which farther defends them against the sea. But the current of the Indian Ocean, which passes through the parallel channels of these clusters, is so violent, that it would be impossible for the inhabitants to have any intercourse with each other, had not nature arranged all this in her own admirable manner. She has divided each of these clusters by two particular channels, which intersect them diagonally, and the extremities of which exactly terminate at the extremities of the great parallel channels which separate them. So that, if you wish to pass from one of these Archipelagos to another, when the current is easterly, you take your departure from that in which you are, by the diagonal canal of the east, where the water is calm, and you commit yourself, afterward, to the current which passes through the parallel channel, you proceed in a deflecting course to land on the opposite cluster, into which you enter by the opening of its diagonal channel toward the west. The mode of proceeding is reversed when the

the current changes, six months afterward. Through these interior communications the islanders can, at all seasons, make excursions from isle to isle, the whole length of the chain from north to south, notwithstanding the violence of the currents which separate them.

Every isle has its proper fortifications, proportioned, if I may say so, to the danger to which it is exposed from the billows of the ocean. We have no occasion to suppose tempests, in order to form an idea of their fury. The simple action of the

TRADE WINDS,

however uniform, is sufficient to give them, unremittingly, the most violent impulsion. Each billow, joining to the constant velocity impressed upon it every instant by the wind, an acquired velocity, from its particular movement, would form, after running through a considerable space, an enormous mass of water, were not its course retarded by the currents which cross it, by the calms which slacken it, but, above all, by the banks, the shallows, and the islands which break it.

A very perceptible effect of this accelerated velocity of the waves is visible on the coasts of Chili and Peru, which undergo, however, only the simple concussion, and repercussion of the waters of the South Sea. The shores are inaccessible through their whole extent, unless at the bottom of some bay, or under the shelter of some island, situated near the coast. All the islands of that vast ocean, so peaceful as to have the appellation of Pacific, are unapproachable on the side which is exposed to the currents, occasioned by the trade winds only, unless where shelves or rocks break the impetuosity of the waves. It is there a spectacle at once superb and terrible, to see the vast

D

fleeces

fleeces of foam which incessantly rise from the bottom of their dark and rugged windings ; and to hear their hoarse roaring noise, especially in the night-time, carried by the winds to several leagues distance.

ISLANDS ARE NOT FRAGMENTS,

then, separated by violence from the continents. Their position in the ocean, the manner in which they are defended, and the length of their duration, constitute a complete demonstration of this assertion. Considering how long the sea has been battering them with its fury, they must have been by this time, reduced to a total ruin : but at this day, the utmost extremities of Sicily hear, as formerly, the roarings of Scylla and Charybdis.

END OF THE THIRD STUDY.

FOURTH

FOURTH STUDY.

BEAUTY OF THE VEGETABLE WORLD.

MEN of wit, who have never travelled, have amused themselves by describing the world, as it came out of the hands of Nature, as if the giants had been fighting in it. They represent its rivers as flowing here and there at random ; its morasses as vast collections of mud ; the trees of forests turned upside down ; its plains covered with stones, briars and thorns ; its paths as impassable ; and all its cultivation as the work of human genius. I confess that these pictures, though picturesque, have frequently afflicted me, because they took away my confidence in the AUTHOR of Nature. To no purpose could it be supposed that, in other respects, he had loaded man with benefits : he had forgotten one of our first wants, if he had neglected to take care of our habitation. The

INUNDATIONS

of rivers, which have been complained of, such as those of Amazon, of Oroonoko, and a great many others, are periodical. They manure the land which they overflow. We know, besides, that the

banks of these rivers swarmed with populous nations, before any European had formed a settlement there. The inhabitants derived much benefit from these inundations, partly from the abundance of the fisheries, partly from the fertility communicated to the lands. So far from considering them as convulsions of nature, they received them as blessings from Heaven, just as the Egyptians prized the overflowings of the Nile. Was it, then, a mortifying spectacle to them, to see their deep forests intersected with long alleys of water, which they could traverse without trouble, in all directions, in their canoes, and pick the fruits at their ease? Nay, certain tribes, such as those of the Oroonoko, determined by these accommodations, had acquired the singular habit of dwelling on the tops of the trees, and of seeking there like the birds, an habitation, and food, and a fortress. Whatever may be in this, most of them inhabited only the banks of the rivers, and preferred them to the vast deserts with which they are surrounded, though not exposed to inundations. We see

ORDER

only where corn can grow, The habit which we have acquired of confining the channels of our rivers within dikes and mounds, of gravelling and paving our high roads, of applying the straight line to the walks in our gardens, and to our basons of water, of squaring our parterres, nay, our very trees, accustoms us to consider every thing which deviates from our rectangles, as given up to confusion. But it is in that with which we have interfered that we frequently see real disorder. We cause fountains to play upon the tops of mountains; we plant poplars and limes upon rocks; we plant vineyards in valleys, and meadows upon hills.

Let

Let these laborious achievements be neglected a little, all these petty levellings will be confounded under the general levelling of continents, and all this culture, the work of Man, disappear before that of Nature. Our sheets of water degenerate into marshes; our green walks of mangled trees disdain the preposterous shapes, into which they have been cut, and burst into luxuriance; every bower is choked, every avenue closes; the vegetables which are the natural produce of the soil, declare war against the strangers; the starry thistle, and vigorous verbascum, stifle, under their large leaves, the English short grassy sod; thick crops of rye-grass, and trefoil, gather round the trees of Palestine; the briars climb among them with their thorns, as if mounting a breach; tufts of nettles take possession of the urn of the Naiads, and forests of reeds spring up in the forges of Vulcan; greenish scales of minium corrode the faces of the Venuses, without paying respect to their beauty. The trees themselves lay siege to the mansion; the wild cherry, the elm, the maple, mount upon its ridges; their long roots penetrate into its lofty pediments, and at length obtain the victory over its haughty cupolas. The ruins of a park merit the reflections of the sage, not less than those of an empire: they equally shew how weak is the power of man, when he opposes it to that of nature.

I have not had the felicity, like the primitive navigators, who discovered uninhabited islands, to contemplate the face of the ground as it came from the hand of the CREATOR; but I have seen portions of it which had undergone alterations, sufficiently trifling to shew me that nothing could equal their

PRIMITIVE BEAUTIES.

These had an influence over the writers of the first counts which were given of them; and they communicated

municated them a freshness, a colouring, and a natural grace which I cannot describe, that will ever advantageously distinguish them, notwithstanding their simplicity, from the learned descriptions which have been produced in modern times.

To the influence of these undisfigured landscapes, I ascribe the superior talents of the earliest writers who have painted nature, and the sublime enthusiasm which an Homer, and an Orpheus, have transfused into their poetry. Among the moderns, the historian of Anson's voyage, of those of Cook, Banks, Solander, and some others, have described several of these natural sites, in the islands of Tinian, Masso, Juan Fernandez, and Taiti, which have delighted all persons of real taste, though these islands have been in part, degraded by the Indians and Spaniards.

I have seen no countries but such as have been frequented by Europeans, and desolated by war, or by slavery: but I shall ever recollect with pleasure two of these natural sites—the one on one side the tropic of capricorn; the other beyond the sixtieth degree of north latitude. Notwithstanding my inability, I am going to attempt a sketch of these, in order to convey, as well as I can, an idea of the manner in which nature disposes her plains in climates so opposite.

The first was a part, then uncultivated, of the

ISLE OF FRANCE,

of fourteen leagues in extent, which appeared to me the most beautiful portion of it, though the black renegadoes, who take refuge there, had cut down, on the sea-shore, the *lataniers*, of which they make their huts, and, on the mountains, the *palmettos*, whose tops they use as food, and the *liannes*,
of

of which they make fishing nets. They likewise disfigure the banks of the brooks, by digging out the bulbous roots of the *nymphæa*, on which they live; and even the banks of the sea, where they eat every species of shell-fish without exception, leaving the burnt shells piled up here and there in large hillocks. Notwithstanding these disorders, that part of the island had preserved traces of its ancient beauty. It is perpetually exposed to the south-east wind, which prevents the forests that cover it from extending quite down to the brink of the sea; but a broad sel-vage of turf, of a beautiful sea green, which surrounds it, facilitates the communication all around, and harmonises on the one side with woods, and, on the other, with the azure of the waves.

The view is thus divided into two aspects, the one terrestrial, the other maritime. The land prospect presents hills which retire behind each other, in the form of an amphitheatre, and whose contours, covered with trees in pyramids, exhibit a majestic profile on the vault of the heavens. Over these forests rises, as it were, a second forest of palmettos, which balance, above the solitary valleys, their long columns, crowned with parti-coloured plumes of palms, surmounted with a spiral peak. The mountains of the interior present, at a distance, oval-shaped rocks, clothed with great trees, and pendent liannes, floating like drapery in every breath of wind. Above these, lofty pinnacles arise, round which are continually collected the rainy clouds; and when these are illuminated by the rays of the sun, you see the colours of the rainbow painted on their peaks, and the rain-water flowing down their dusky sides in brilliant sheets of crystal, or, in long fillets of silver. No obstacle prevents your perambulating the borders which embellish their sides and their bases, for the rivulets which descend from the mountains present along their banks slips of sand, or plates of rock,

from which they have washed away the earth. Besides, they clear a free passage, from their source, to the place of their discharge, by undermining the trees which would grow in their channel, and by fertilising those which spring up on their margin; and they leave above them, along all their course, great arches of verdure, which retire in perspective, and which are visible from the shore of the sea. The liannes interlacing about these arches, secure them from the wind, and decorate them most beautifully, by opposing to their foliages, other foliages, and to their verdure, garlands of brilliant flowers, or seed-pods of various colours. If a tree, wasted by age, happens to fall down, Nature, which universally hastens on the destruction of all useless things, covers its trunk with maiden-hair of the most beautiful green, and agarics, waved with yellow, saffron, and purple, which feed on the ruin. Toward the sea-side, the turf which borders the island is up and down sowed with thickets of *latanier*, whose palms, formed into a fan, and attached to pliant membranes, radiate in the air, like so many verdant fans. These *lataniers* advance even into the sea, on the capes of the island, with the land fowls which inhabit them; while the small bays swarming with multitudes of sea fowl which swim in the water, which are paved, if I may use the expression, with madrepores of the colour of peach blossoms; the black rocks covered with rose coloured nerits, and shells of every kind penetrate into the island, and reflect, like so many mirrors, all the objects of the land of the heavens. You would imagine that you saw the birds flying in the water, and the fishes swimming among the trees; and you would think of the marriage of Terra and Oceanus, who thus intermingle and confound their domains.

In the greatest part, even of uninhabited islands, lying between the tropics, when the discovery of
them

them was made, the banks of sand which surround them were found to be filled with turtle, which came thither to lay their eggs, and with the scarlet flamingos, which, as they sit on their nests, resemble burning torches. They had, besides, a border of mangliers, covered with oysters, which opposed their floating foliage to the violence of the waves, and of cocoa trees, loaded with fruit, which advancing into the very sea, along the breakers, presented to the mariner's eye the aspect of a city, with its ramparts, and its avenues, and announced from afar, the asylum prepared for them by the god of the seas. These different kinds of beauty must have been common to the isle of France, with many other islands, and were, in all probability destroyed by the craving necessities of the first mariners who landed upon them. Such is the very imperfect representation of a country, the climate of which, according to ancient philosophers, was uninhabitable, and the soil of which modern philosophers consider as the scum of the ocean, or of volcanos.

The second rural scenery which I surveyed with rapture, and of which I am going to attempt a description, was in

RUSSIAN FINLAND,

where I was employed, in 1764, on a visitation of its fortresses, with the general of the corp of engineers, in which I then served. We were travelling between Sweden and Russia, and through a country so little frequented that the firs had encroached on the great line of demarkation that separates the two countries. It was impossible to get through in a carriage, and we were under the necessity of employing the country people to cut down the trees, that our equipages might follow us. We were able, however, to penetrate in every direction on foot,

and, frequently, on horseback, though we were obliged to inspect the windings and the crevices of a great number of rocks, in order to ascertain their natural capability of defence; and though Finland is so covered with these, that ancient geographers have given it the name of *Lapidosa*.

Not only are these rocks scattered about in great blocks over the surface of the earth, but the valleys, and intire hills, are there, in many places, formed of a single mass of solid rock. This rock is a soft granite, which exfoliates, and whose scurf fertilises the plants, at the same time that the enormous mass shelters them from the north wind, and reflects on them the rays of the sun, by their curves and by the particles of mica, with which the rock is filled. The bottoms of these valleys were skirted with long borders of meadow, which every where facilitate the communication. In those places where the rock was pure, as originally, there grew in abundance, a plant called by the natives

KLOUKVA,

which thrives on the rock, and seldom rises higher than a foot and an half; but it spreads in all directions, and to a great distance. Its leaves and verdure resemble that of the box, and its runners are loaded with a red berry, good to eat, and resembling the strawberry.

THE FIR,

the birch, and the service-tree thrive wonderfully well on the sides of the hills, though, in many places, they found scarcely earth sufficient in which to insert their roots. The summits of the greater part of these rocky eminences were rounded in form of a skull-cap, and rendered quite glistening by the
water

water which oozed across the long crevices that followed them. Many of these skull-caps were perfectly bare, and so slippery that it was difficult to walk over them. They were crowned, round and round, with a broad belt of moss of an emerald green, out of which sprung up, here and there, an infinite multitude of mushrooms of every form, and of every colour. Some of them were shaped like large scarlet-coloured tweezer cases, studded with dots of white; others were orange coloured, and formed like a parasol; others as yellow saffron, and of the shape of an egg. Some were of the purest white, and so well rounded, that you would have taken them for ivory draughtsmen. These mosses, and these mushrooms, spread along the fillets of water from the summits of the rocky hills, spread in long rays across the woods, with which their sides are covered, and proceeded to skirt their extremities till they were confounded with a multitude of strawberry and raspberry plants. Nature, to indemnify this country for the scarcity of apparent flowers to please the eye, of which it produces but few, has given their perfumes to several plants, such as the *calamus aromaticus*, the birch which in spring exhales a kind of odour of roses, and the fir, the apple of which is sweet scented. She has, in like manner, diffused the most agreeable colours, and the most brilliant flowers on the most common vegetables, such as the cones of the larch, which are of a beautiful violet, on the scarlet grains of the sorb-apple, on mosses, and mushrooms, and even on

TURNIP RADISHES.

Upon the subject of this last vegetable, hear what has been said by the accurate *Corneille le Bruyn*, in his voyage to Archangel.

“During our residence among them,” (the Samoides,

moides,) “ they brought us several sorts of turnips, of various colours, and extremely beautiful. Some of them were violet-coloured, like our plums, grey, white, yellowish, all of them streaked with red, like vermillion, or the finest laca, and as pleasing to the eye as the flower called the *pink*. I painted some of them on paper, in water-colours, and sent some to Holland, in a box filled with dry sand, to one of my friends, who is fond of such curiosities. I carried my paintings to Archangel, where no one would believe that they were copied after nature, till I produced the turnips themselves: a proof that no great attention is paid there to the rarest and most curious productions of nature.”

I take these turnips to be of the radish sort, the bulb of which grows above ground. At least I presume so, from the drawing itself of Corneille le Bruyn, and from having seen such in Finland: they are, in taste, superior to that of our colewort, and they have a flavour similar to the artichoke bottom. I have produced these testimonies of a painter, and that painter a Dutchman, respecting the beauty of these coloured vegetables, to correct the prejudice with which so many are hurried away, that, in the Indies only, the sun gives a magnificent colouring to plants. But nothing, in my opinion, equals the beautiful green of the plants of the North, in Spring. I have frequently admired in particular, that of the turf, and of the mosses, some of which are glazed with violet and purple. The solemn firs themselves, then burst into festoons of beautiful green; and, when they come to throw from the extremity of their branches, the yellow tufts of stamina, they appear like pyramids, covered all over with little lamps.

We encountered no obstacle in traversing these forests: sometimes there lay in the way an aged birch, laid low by the hand of time, and worm eaten, but

but in stepping upon the rind, it supports you like a piece of thick leather; the wood of these birches decays very fast, and their bark, which no humidity is able to corrupt, is carried away on the melting of the snows, into the lakes, where it swims about all in one piece. As to the firs, when they fall, humidity and the mosses consume them in a very little time. This country is intersected with great

LAKES,

which every where present new means of communication, as they penetrate far into the land by their branching gulfs, and exhibit a new species of beauty, by reflecting in their still waters, the openings of their vallies, the mossy hills, the overhanging firs, bending from the promontories over their shores.

It would be no easy matter to describe the hospitable reception which we found in these northern regions; the people exerted themselves in every possible way to detain us among them for many days together: they sent to the distance of ten, or fifteen leagues, invitations to their friends and relations, to come and assist them to entertain us. The days and the nights, passed away in festivity. In the cities, the principal inhabitants regaled us by turns. Amid this hospitable conviviality, we made the tour of the cities of Finland, that region of poverty, Wiburg, Villemanstrand, Fredericsham, Nissot, &c. The castle of this last town is situated on a rock at the discharge of Lake Kiemen, which surrounds it with two cataracts. From its platforms you perceive the vast extent of that lake. We dined in one of its four towers, in a small apartment, illuminated by windows like gun-ports. It is the very apartment in which the unfortunate *Ivan* was so long confined, who descended from the throne of the Russian empire at the age of
two

two years and a half. But this is not the place to expatiate on the influence which moral ideas may diffuse over landscapes.

PLANTS:

These are not scattered about at random over the earth; and though nothing has yet been said respecting their general arrangement in various climates, this simple sketch is sufficient to shew that there is order in their combination. If we examine, in like manner, even superficially, their developement, their attitude, and their magnitude, we shall see that there is as much harmony in the aggregation of their component parts, as in the aggregation of their species. It is impossible, in any one respect, to consider them as the mechanical productions of heat and cold, of dryness and humidity; all these causes, united, could not have determined the figure of a single moss. In order to be convinced of this, let us begin with the

CIRCULATION OF THE SAP OF PLANTS.

It has been laid down as an indubitable principle that, their saps ascend through the wood, and re-descend through the rind. To the experiments which have been detailed in proof, in support of this opinion, I shall oppose only the instance of a great chestnut tree, in the garden of the *Thuilleries*, near the terrace of the *Feuillants*, which, for twenty years past, has had no bark round its under part, and which, notwithstanding, is in perfect vigor. Many elms on the *Boulevards* are in the same state. On the other hand, we have seen old hollowed willows, which have not a bit of good wood left. Besides, how is it possible to apply this principle of vegetation to a multitude of plants,
some

some of which are composed entirely of tubes, and to others which have no rind, being inclosed only with dry pellicles ?

Neither is there more truth in the supposition, that they rise in a perpendicular line, and that to this direction they are determined by the action of columns of air. Some, it must be allowed, do follow this direction, as the fir, the stalk of corn, the reed : but a much greater number deviate from it, such as creeping plants of every species, vines, liannes, french-beans, &c. Others ascend vertically, and having arrived at a certain height, in an air perfectly unobstructed, they fork into various tiers, and extend their branches horizontally, as the apple tree : or they incline them toward the earth, as the fir : or, hollow them in form of a cup, as the *saxifrage* : or, round them into a mushroom's head, like the pine : or, straiten them into a pyramid, like the poplar : or, roll them as wool on the distaff, like the cypress : or, let them float at the discretion of the wind, like the birch.

All these attitudes may be seen under the same bearing of the wind. Nay, there are some which assume forms which the gardener, with all his art, would have much trouble to give them. Such is the *badamier* of the Indies, which grows up into the form of a pyramid, and has it divided into stories, like the king of the chess-board. There are plants, uncommonly vigorous, which, far from rising upward, always creep upon the ground. Such is the false potatoe of India, which loves to crawl along the sand of the shores in hot countries, covering whole acres in its progress. Such, too, is the *ratan* of China, which frequently grows in similar situations. These plants do not crawl from weakness. The scions of the *ratan* are so strong that, the Chinese make cordage of them for their shipping ; and, when they are on the ground, they serve
as

as a trap for the deer, who find it impossible, with all their strength, to disengage themselves.

Plants, it has been said, are mechanical bodies. Try, then, to make a body so slim, so tender, so fragile, as that of a leaf, which shall resist, for whole years, the winds, the rains, the keenest frost, and the most ardent sun! A spirit of life, independent of all latitudes, governs plants, preserves, and reproduces them. Their wounds are healed, and their scars are covered with a new rind. The pyramids of Egypt are crumbled into powder, and the grasses of the times of the Pharoahs still subsist. How many Greek and Roman sepulchral monuments, the stones of which were rivetted with iron, have, one after another, disappeared! Nothing remains around their ruins, except the cypresses which shaded them.

It is

THE SUN,

they say, who gives, and who maintains the existence of vegetables. But this prime mover of nature, all-powerful as it is, is not the only and determining cause of even their expansion. If it be true that in our climates, the heat of the sun invites the greater number of flowers to open, in others, it obliges them to close. Such are, of this last description; the great nightshade of Peru, and *arbor tristis*, of the Moluccas, which flower only in the night-time. Nay, his remoteness from our hemisphere does not destroy in it the power of vegetation. It is in winter that the greater part of the mosses grow, which clothe rocks with an emerald green, and that the trunks of the trees are covered, in humid situations, with plants imperceptible to the naked eye, called *minium* and *lichen*, which make them appear, when glazed with ice, like columns of green bronze. These vegetations, in the coldest times of winter, destroy at once
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all our reasonings respecting the universal effects of heat, as plants, of an organization so delicate *seem* to need, for their expansion, the softest temperature. Again; the

FALL OF THE LEAF.

itself, which we have been taught to believe an effect of the sun's absence, *is not occasioned by cold*. If the palm retains its foliage, all the year round, in the South, the fir is equally an evergreen in the north. The birch, it is true, the larch, and several other species of trees, shed their leaves in northern climates on the approach of winter; but a similar depredation is likewise made on other trees to the southward. It is the resinous substance, we are told, which preserves the foliage in the north; but the larch, which is likewise a resinous tree, does not in like manner retain its leaves: whereas the filaria, the ivy, the privet, and many other species, which are not resinous, continue with us, in full verdure, at all seasons.

Without recurring to mechanical causes, the effects of which always contradict those who attempt to prove them general, why may we not, in the variableness of vegetation, discover the constancy of

PROVIDENCE?

Providence has given trees always green to the south, and has clothed those trees with a broader foliage, to shelter animals from the heat. Providence has likewise befriended animals in giving them there a covering with very little hair, which is, consequently, cool; and he has covered the earth which they inhabit, with ferns and green *liannes*, that it may be always refreshing to them. In the meantime, the same Providence has not forgotten the wants

wants of the animals of the north. The ever-green firs are spread as a roof over their heads, whose lofty and tufted pyramids ward off the snow from their roots, and whose branches are so well furnished with long grey mosses, that the trunk is almost invisible; for a bed, a bank of moss is accumulated upon the ground, in many places of more than a foot in thickness; and the soft and dry leaves, *which fall precisely at the approach of the inclement season*: finally, their provision, too, is laid up in store, namely the fruits of those very trees which have then arrived at their full maturity. To these are added, here and there, the scarlet clusters of the forb-apple, which sparkling from afar, over the whiteness of the snows, invite the birds to an asylum; so that the partridge, and the moor-cock, every species of snow-birds, and the hare and the squirrel, frequently find, under the shelter of the same fir, a lodging, food, and warm shelter.

But one of the greatest blessings of Providence, to the animals of the north, is, the cloathing them with furred garments of long and thick hair, which regularly grow in Winter, and fall off in Summer. Naturalists, who consider the hair of animals as a species of vegetation, are at pains to account for this growth and decay from the influence of heat. They pretend to support their system by the instance of the human hair and beard, which grow rapidly in Summer. But I would ask them—How it comes to pass that, in cold countries, horses which, in Summer are black and smooth, assume, in Winter, a long and shaggy coat, like the fleece of a sheep? To this they reply: It is the internal heat of their body, increased by the external action of the cold, which produces wonderful phenomena. Very well: but I am under the necessity of observing that, cold does not produce this effect on the human beard and hair; for it retards their growth; that, besides in
the

the case of animals, on which Providence bestows a clothing peculiarly warm, the hair is much longer and thicker on those parts of the body which have the least natural heat, such as the tail, which is very bushy, in horses, martens, foxes and wolves ; and that this hair is short and thin on those parts of them which have most natural heat, as the belly. Their backs, their ears, and frequently their very paws, are the parts most amply furnished with hair. But I satisfy myself with opposing this last objection : the external and internal heat of an African Lion, ought surely, to be as ardent, at least, as that of a Siberian wolf ; whence is it, then, that, the first is smooth, as if newly shaven, whereas the other is shagged up to the eyes ? The

COLD,

which we have been taught to consider as one of the greatest obstacles of vegetation is as necessary to certain plants as heat is to others. If those of the South could not thrive in the North, those of the North would not succeed better in the South. The Dutch have made many a vain attempt to make the fir grow at the Cape of Good Hope, in order to produce a supply of ship-masts, which sell at a very high price in India. Many planters in the ISLE of FRANCE, have made attempts equally fruitless, to raise in that island the lavender, the daisy, the violet, and other plants of our temperate climate. Alexander, who transplanted whole nations at his pleasure, could not, with all his efforts, make the ivy of Greece grow in the vicinity of Babylon : though he was very ambitious of acting, in India, the character of Bacchus, in every particular.

I am persuaded, however, that, it might be possible to succeed in effecting these vegetable transigrations by employing

ICE

ICE

in the south, for the propagation of northern plants, as we employ stoves in the north, in the propagation of the plants of hot climates. I do not believe that there is a single spot on the globe in which we could not, with a little address and industry, procure ice, as easily as we procure salt. In the whole course of my travels, I never met with a temperature more sultry than that of the island of Malta; though I have twice crossed the Line, and have passed a considerable part of my life in the Isle of France, where the Sun is vertical twice a year. The soil of Malta consists of little hills of white stone, which reflect the rays of the Sun with so much force that, the eye-sight is sensibly affected by it; and when the wind from Africa, known by the name of *Syroco*, which issues from the sands of Zara, on its way to melt the ice of the north, comes to pass over that island, the air is as hot as the breath of an oven. I recollect a figure of Neptune in Bronze, upon its shore, the metal of which, at that season, was heated to such a degree that you could scarcely apply your hand to it. The Maltese, however, imported snow into the island, from Mount Etna, which is sixty leagues distant; they kept it for months together, laid on straw, in vaults; and it was to be bought for a farthing a pound weight, notwithstanding it was farmed out. Since, then, they can have snow at Malta, in the dog-days, I believe that it might be had in every country in the world. Besides, Nature, as we have seen, has multiplied icy mountains in the neighbourhood of hot countries. I may, perhaps, be reproached for having indicated here the means of increasing luxury; yet since the common people only live, at present upon the luxury of the rich, I may be readily excused; but my intention is only to promote the science of Nature.

It cannot be that cold is the enemy of all plants, for, in the north, we find forests of the tallest growth, and of the greatest extent of any in the world. It is at the feet of the eternal snows of Lebanon that the cedar, the king of the vegetable world, rises in his full majesty. The fir which, next to the cedar, is the largest tree of our forests, does not rise to its prodigious altitude but on icy mountains, and in the cold climates of Norway, and of Russia.

Before I had travelled in northern countries I figured to myself, according to the laws of our naturalists, that the earth there must be stripped of all its vegetables by the rigor of the cold. I was greatly astonished to see there the largest trees that I had ever seen in my life, and so thickly spread that, a squirrel could easily traverse the greater part of Russia without setting a foot upon the ground, by springing from branch to branch. This forest of firs covers Finland, Estonia, the whole space comprehended between Petersburg and Moscow, and thence extends over a great part of Poland, where oaks begin to grow, as I have myself observed in travelling through these countries. But, after all, what I have seen was only the smallest part, for it is known that, the forest extends from Norway even to Kamschatka, some sandy deserts excepted; and from Breslau as far as the shores of the frozen sea.

END OF THE FOURTH STUDY.

FIFTH STUDY.

FISHES.

IN the preceding Study the *habitation* of man is shewn to have been provided with infinite goodness and wisdom :

challenging human scrutiny ; and proved
then skilful most, when most severely judged.

Our proofs of this have been adduced from, what are freely called ‘ inhospitable climes :’ at present, we are going to shew, from facts related of the same parts of the world, that, Providence has not been less bountiful in the provision of our *food*.

In speaking of the fruitfulness of northern regions, it would be easy to dwell upon the numerous chaces of elks, rein-deer, water-fowls, heath-cock, hares, white bears, wolves, foxes, martens, ermines, beavers, &c. which the inhabitants of northern countries annually carry on ; the mere furs of which, besides their own wants, produce them a very considerable branch of commerce with all Europe ; but I shall pass over these, and stop only at their fishery ; because this gift of the waters, presented to all nations, is no where so abundant as in the north.

From the rivers and lakes are drawn prodigious multitudes of fishes. *John Schaffer*, the accurate historian of

LAPLAND,

LAPLAND,

says that, there is every year taken, at Tordeo, full thirteen hundred boat loads of *salmon*; that the *pikes* there are as large that, some are so long as a man; and that, every year the Laplanders salt a sufficient quantity for the support of four kingdoms of the north. But these plentiful supplies are nothing when compared to the fisheries of the seas. It is in the bosom of these that the monstrous

WHALE

is taken. This fish is, commonly, sixty feet in length, twenty feet broad over the body, and, at the tail, eighteen feet high, and yields an hundred and thirty barrels of oil. The fat is two feet thick, and in cutting it off it is necessary to use great knives, six feet long.

From the seas of the north immense shoals of fishes annually take their departure, and enrich all the fishers of Europe. Among these are cod, anchovies, sturgeon, dory, mackarel, pilchards, herrings, sea-dogs, belugas, sea-calves, porpoises, puffers, sea-unicorns, saw-fish, &c. The size of all these is more considerable than the fish of temperate latitudes; and they are divided into a greater number of species. The number of the species of *whales* have been counted as far as twelve, and *plaice* are caught in those seas of the weight of four hundred pounds. I shall confine myself, however, to those sorts of fish which are most known; such as herrings. It is an incontestible fact that, the seas of the north send out, every year, a quantity of these fish that is more than sufficient to feed all the inhabitants of Europe. If then there be want, hunger, and scarcity of provision, do not blame Nature.

We

We have documents which prove that, the

HERRING FISHERY

was carried on so far back as the year 1163, in the straits of Sunda, between the islands of Schonon and Seeland. *Philip de Mésières*, governor, under *Charles VI.* relates, in the '*Dream of an old pilgrim*,' that, in 1389, in the months of September and October, there was, in those straits, a quantity of herrings so prodigious that, "for the space of many leagues," he says, "you might have cut them with a sword; and it is matter of common notoriety that, there are forty thousand boats employed during two months, in nothing but the draught of herrings; each boat containing at least, six persons, and many ten; and, besides these, there are five hundred vessels, large and small, which are employed in picking and salting these herrings in barrels." He makes the number of persons employed in these fisheries amount to three hundred thousand, Prussians and Germans. In 1610, the Hollanders, who carry on the herring fishery still farther to the north, where the fish is better, employed in it three thousand vessels, and fifty thousand fishermen, without reckoning nine thousand other vessels, employed in barreling and conveying the cargoes to Holland; and an hundred and fifty thousand men, at sea, and on shore, occupied in carrying, purchasing, and selling again. They derived from it, then, a revenue of two millions, six hundred, and fifty thousand pounds sterling. I myself witnessed, at Amsterdam, in 1762, the joy of the people, which was expressed by displaying streamers and flags over the shops where herrings were exposed to sale, on the first arrivals; and in every street this was the case. I have heard it said that, their company formed for this

this fishery, was richer, and contributed more to the sustenance of mankind, than their East-India company. The Danes, the Norwegians, the Swedes, the Hamburgers, the English, the Irish, and some traders of the ports of France, as that of Dieppe, send vessels to this fishery, but in too small number for a manna so easily gathered.

In 1782, at the mouth of the *Gothela*, a little river which washes the walls of *Gottenburg*, the people salted one hundred and thirty-nine thousand barrels; smoked three thousand and seven hundred, and extracted two thousand, eight hundred, and forty-five barrels of oil from those which they could not keep. The gazette of France, which gave an account of this fishery, remarks that, previous to the year 1752, these fish had never appeared during a space of seventy-two years. I attribute their abandonment of that coast to some naval combat which had driven them away with the noise of artillery, as happens with the turtles of *Ascension-island*; who forsake the road, for many weeks, if a vessel passing by discharge her guns. The case of the herrings might be, perhaps, accounted for from some conflagration of the forests which had destroyed the vegetables that invited the fish to the coasts.

The good bishop of Berghen, *Pont-Oppidan*, the *Fenelon* of Norway, who introduced into his popular sermons whole tracts of natural history, as excellent pieces of theology, relates that, when the herrings coasted along the shores of Norway, "The
" whales pursue them in great numbers, and throw-
" ing their water-spouts into the air, give to the
" sea, at a distance, the appearance of being co-
" vered over with smoking chimnies. The her-
" rings, in order to elude their pursuers, throw
" themselves close in-shore, into every little
" bay and creek, where the water, before tranquil,
" forms considerable swellings and surges wherever
E " they

“ they could make their escape. They come in such quantities that you may take out basketsful, and the country people can even catch them with the hand.” After all, however, that the united efforts of all these fishers can effect, hardly any impression is made upon their great general column, which coasts along Germany, France, and Spain, and stretches as far as the straits of Gibraltar; devoured, as they go along, by innumerable multitudes of other fishes, and sea-fowls, who follow them night and day, till the column is lost upon the shores of Africa, or returns, according to some authors, to the northern climates.

For my own part, I no more believe that the herrings return to the northern seas, than that the fruits re-ascend the trees from which they have fallen. Nature is so magnificent in the feast which she prepares for man, that she never presents the same dishes twice. I presume, according to an observation of Father *Lamberti*, a missionary in Mingrelia, that, these little fishes accomplish the circuit of the Mediterranean, and that, the extreme boundary of their emigration is the extremity of the Black Sea; I suppose, and this with the more foundation because, the *pilchards*, which come from the same places, follow the same track; as is proved by the copious fisheries of them, carried on along the coasts of Provence and Italy. “ One sometimes sees many herrings,” says Father *Lamberti*, “ in the Black Sea; and in the years when this happens, the inhabitants draw a favourable presage of an abundant sturgeon-fishery; and they form a contrary expectation when the herrings do not appear. There was seen, in 1642, so great a quantity that, the sea having thrown them on the shallows that separate Trebisond from the country of the Abcasses, the whole coast was covered and surrounded with
a bank

“ a bank of herrings that was, at least, three hand-
 “ breadths in height. The people of the country
 “ apprehended that the air would be infected by the
 “ corruption of these fishes ; but they presently
 “ saw the coast covered with crows and rooks who
 “ delivered them from their fears, by eating the
 “ fish. The country people talk of a similar event
 “ having happened before ; but, then, the quan-
 “ tity was not so great.”

This prodigious number of herrings is certainly astonishing ; but our admiration will be redoubled if we consider that, the column here spoken of is not half of that which issues every year from the north. This column divides at the extremity of Iceland ; and while one part comes to spread abundance on the coasts of Europe, the other goes to carry it to those of America. *Anderson* says that, herrings are so numerous on the coasts of Iceland that, a shallop can scarcely force its way through them even with the assistance of oars. They are accompanied by a prodigious number of pilchards and cod, which renders fish so common in that island that, the inhabitants dry them and reduce them to meal with grind-stones to feed their oxen and horses. *Father Rale*, a jesuit missionary in America, speaking of the people who live between Acadia and New England, says that, “ they resort at a certain season to
 “ a river at a little distance, where, during a
 “ month, the fishes force their way up in so great
 “ quantity that, had they hands sufficient, they
 “ might fill fifty thousand barrels in a single day.
 “ It is a species of very large herring, very agree-
 “ able to the taste when fresh. They are pressed
 “ one upon another to a foot in thickness, and are
 “ taken out in pails-full, like water. The people
 “ dry them in eight or ten days, and live on them
 “ during the whole time of seed-sowing.”

This testimony is confirmed by a great many others, and particularly by a gentleman of English family, born in America, who has written the history of Virginia: 'In the spring,' he says, 'herrings come up the rivulets and fords of rivers in such quantities that, it is almost impossible to pass on horseback without trampling on these fish.— Hence it comes to pass that, at this season of the year, those parts of the rivers where the water is fresh, are infected by the fish that is in them. Beside herrings, may be seen an infinite number of shad, roach, sturgeon, and a few lampreys, which pass from the sea into the rivers.'

It would appear that, another column of this fish issues from the north pole toward the east of our continent, and passes through the channel which separates America from Asia: for a missionary says that, the inhabitants of the land of Yasso go to sell at Yap-an, herrings, among other dried fish. The Spaniards, who have attempted to make discoveries to the north of California, have found all the people of those nations to be fish-eaters, and totally regardless of agriculture. Though they have landed among them only in the middle of summer, before the fishing season, perhaps, had commenced, they found prodigious quantities of pilchards; the native country and emigrations of which are the same as those of herrings, for vast quantities, of a smaller size, are taken at Archangel. I have eaten of them in Russia, at the table of M. the Mareschal *Munich*, who called them *anchovies of the north*.

But as the northern seas, which separate America from Asia, are unknown to us, I shall follow this fish no farther. I must, however, observe that, more than half these herrings are full of eggs, and if the multiplication of them were to go on uninterruptedly, for a little time only, the whole ocean would not be capable of containing them. I have
been

been rather diffuse on the subject of this fish, not for the sake of our commerce, which, by its offices, its bounties, its privileges, its exclusions, renders every thing scarce with which it interferes; but for the sake of the subsistence of the common people, who are reduced, in many places, to eat nothing but bread, while Providence gives to Europe fishes, and those, perhaps, the most delicate that the sea produces, with a hand so liberal*. We must not judge of their delicacy from those which are brought to London, or Paris, at the latter end of the season, and which are caught close to our temperate coasts, but from those which are caught in the north, known in Holland by the name of pickled herrings, which are thick, long, fat, having the flavor of a nut, so delicate, and so juicy, that they would melt away in cooking, and are eaten raw from the pickle, as are anchovies.

THE SOUTH POLE

is not less productive of fish than the north. The people who are near it, such as the inhabitants of the islands of *Georgia*, of *New Zealand*, of *Maire's Strait*, of the *Terra del Fuego*, and of *Magellan's Strait*, live on fish, and practise no kind of agriculture. That honest navigator Chevalier *Narbrught*, says, in his journal kept in the south-sea, that, *Port-Desire*, which is in forty-seven degrees, forty-eight minutes, south latitude, is so full of penguins, sea-calves, and sea-lions, that, every vessel which touches there may find plenty of provisions. All these animals, which were very fat, live only upon fish. When the Chevalier was in *Magellan's Strait*, he caught,

* More than one epicure has already made this observation; but let us attend to another which strikes but few people: in all cases, and in all countries, *the most common things are the best.*

at a single draught of the net, more than five hundred large fishes resembling mullets, as long as the leg of a man; smelts twenty inches long, a large quantity of fish resembling the anchovy: in short, he found such abundance of all kinds, that his people ate nothing else during their whole stay. The beautiful mother-of-pearl shells, which are known in our cabinets under the name of Magellan oyster, are there of prodigious size and excellent eating. The lempit, in like manner, is there very large. 'There must be,' he says, 'an infinity of fish upon those shores, to nourish the sea-calves, the penguins, and other birds, which live entirely on fish, and which are all very fat, notwithstanding that their number exceeds all calculation. We, one day, killed four hundred sea-lions in the course of half an hour. Some of these are eighteen feet long. Those of fourteen feet swarm by thousands. Their flesh is as tender and as white as that of a lamb, and is very good when fresh, but is still better when it has been a little time in salt.' Upon this subject I shall observe that, it is only the fish of cold countries that takes salt well, and that retains, in its corned state, a part of its flavor. It appears that, nature has desired, by this mean, to communicate to all the people of the earth, the abundance of fishes that issue from the frozen zones.

END OF THE FIFTH STUDY.

SIXTH STUDY.

ON SOME OF THE EVILS OF HUMAN LIFE.

The fond complaint, my song, disprove,
And justify the laws of Jove!

GRAY.

IT has been demanded—Why should

BEASTS OF PREY

exist? They are exceedingly useful. Were it not for these the earth would be covered with the dead bodies of animals. Every year, one twentieth, at least, of quadrupeds perishes; a tenth part of birds; and an infinite number of insects; most of the species of which live only a single year. There are even insects who live but for a few hours, such as the *ephemera*. As the rains carry down all these spoils to the rivers, and as the rivers convey them to the shores of the sea; it is there, chiefly, that nature has assembled the animals who devour them. Most ferocious beasts descend by night from the mountains, and direct their researches toward the shores. There are even many classes which are expressly created for those places: such are amphibious creatures:

creatures : as white bears, otters and crocodiles. It is particularly in hot countries, where corruption is most rapid, and most dangerous, that nature has multiplied carnivorous animals. Tribes of lions, tygers, leopards, panthers, civet-cats, ounces, hyenas, condors, &c. resort thither, and join those of wolves, foxes, martens, jackals, vultures, &c. Legions of voracious crabs are nested in their sands ; caimans and crocodiles lie in ambush among their reeds ; shell-fish of innumerable species, armed with instruments fit for sucking, for piercing, for filing, and for bruising, are ranged upon their rocks, and pave the borders of their seas ; clouds of sea-birds hover, with loud cries, over their shallows, or sail round them, at the discretion of the waves, in quest of food ; the lamprey, the becune, the carrang, and the whole species of cartilaginous fishes, which live wholly on flesh ; such as the hygians, the long sharks, the broad thorn-backs, the flippers, the polipufes, armed with air-holes, and all the variety of sea-dogs, swim there in crowds, constantly employed in devouring the wrecks of bodies thrown upon their shores.

Beasts of prey are not objects of terror to man. In the first place, there are few that come out in the day-time. They have all striking characters, which announce their approach even before they can be perceived. Some have strong odours of musk, as the marten, the civet, and the crocodile ; others, piercing voices, which are heard in the night at a great distance, as wolves and jackals ; others, have streaks of harsh colours that are perceptible a great distance, on the yellow ground of their skin ; and all have eyes that shine in the dark. Nature has given a part of these general signs to the carnivorous and blood-sucking insects : such are the wasp, whose principal colour is yellow, and whose body has rings of black like the tiger and the gnat, spotted with white

white upon a dark ground, who announces his approach by a loud buzzing. Even those which attack the human body are furnished with remarkable indications. They have either strong odours, as the bug; or oppositions of colour to the places on which they fix, as white insects, on the hair; or, the blackness of fleas on the whiteness of the skin.

Many writers have cried out upon the cruelty of ferocious beasts, as if our cities were liable to the invasions of wolves, or, as if the lions of Africa were, from time to time, making incursions into European settlements. On the contrary, they all avoid the neighbourhood of man, and, as I have said, the greater part roam only in the night. These habits are unanimously attested to by naturalists, hunters, and travellers. When I was at the Cape of Good Hope, *M. de Tolbach*, who was governor, told me that, lions were formerly common in that country; but that, since the Dutch were established there, it would be necessary to go fifty or sixty leagues up the Continent, before one could be found.

After all—what imports their ferocity to us? Have we not arms which they cannot resist, and have we not sagacity superior to all their cunning? But, if we had not these, still, nature has given us dogs, capable of subduing them: and she has adapted their different species, in an admirable manner to the degrees of power possessed by the ferocious beasts, in the countries which they inhabit. In those countries where lions exist, there are races of dogs capable of fighting them, body to body. The animals that are formidable to man are more to be feared from their smallness than from their magnitude. There is not one, however, which does not turn to his advantage. Serpents, centipeds, scorpions, toads, inhabit scarcely any other than humid

and unhealthy places, from which they keep us at a distance more by their hideous figures, than by their poisons. The serpents that are really dangerous, have external signs that denote them from afar: such are the rattles of the American snake. Few persons perish from the wounds they inflict, unless they act in some way imprudently. Besides, our pigs and poultry eat them without any inconvenience. Ducks, in particular, devour them with avidity, as they likewise do most poisonous plants. Those of the kingdom of *Pontus* acquired so much medical virtue by these aliments, which are common there, that, *Mithridates* employed their blood in his famous counter-poisons.

There are, in truth,

NOXIOUS INSECTS

which prey upon our fruits, our corn, and even our persons. But, if snails, may-bugs, caterpillars, and locusts, ravage our plains, it is because we destroy the birds of our groves who would otherwise eat them; or, because, in importing trees from foreign countries into our own, such as the great chestnut of India, the ebony, &c. we bring with them the eggs of insects which these trees nourish, without importing, likewise, the birds of the same climate which destroy them. Every country has birds peculiar to itself, who preserve its vegetables. I have seen one at the Cape of Good Hope, called the gardeners' bird*, continually employed in taking worms and snails. I have likewise seen in the Isle of France, a species of starling, called martin, which comes from India, and which lives intirely on lo-

* This seems to be a species of *sbrike*, or *butcher-bird*, which is found in England, and other parts of Europe, at certain seasons.

could

custs, and insects that infest the cattle. If we could naturalise these birds in Europe, there is no discovery in science which would be equally useful to mankind.

But the birds of our own groves were quite sufficient to preserve our fields, if defended from the bird-catchers, who take them by whole coveys, not always to confine them in cages, but, frequently, for food. A fancy was adopted, some years ago, in Prussia, to exterminate sparrows as enemies to agriculture. Every peasant was subjected to an annual tax of twelve heads of these birds, of which they made salt-petre; for in that country nothing is wasted. At the end of the second, or third year, they perceived that, the harvests were devoured by insects, and they were obliged to invite the sparrows of neighbouring countries to re-people the kingdom. In truth, these birds do eat a few grains of corn, when insects fail them; but insects, and, among others, the weevil, consume bushels and whole granaries: nevertheless, could we destroy the whole race of insects, it would be very imprudent to do so; for, with these we should destroy the greater part of the birds of our meadows, who have no other food to give their little ones, while in the nest. As to the animals who eat the corn in the granaries, and woollen cloths in the warehouse, such as rats, mice, weevils, or mites, and moths, I find that, the former live principally upon filth, in the clearing away of which, they do 'the state some service;' and, besides, nature has given the

CAT

to man, to preserve the interior of his dwelling. Nature has endowed this animal, not only with agility, patience, and wonderful sagacity, but, also, with a spirit of domesticity perfectly suitable to her

office. She attaches herself only to the house, perhaps because she is acquainted with stations where she may watch with success: if the master removes she returns alone during the night. She differs essentially in this respect from the dog, who adheres only to the man himself. The cat has the affection of a courtesan, and the dog that of a lover: the first loves the property, the second the person. The weevil and the moth commit, it must be allowed, great ravages among our corn, and among our woollens. Some writers have said, that our yard fowls are sufficient to clear our

GRANARIES

of them: it is, possibly, true. We have, besides, the spider and the swallow who destroy these weevils when they change (like silk-worms), and becomes flies. For my part I shall consider, here, only their political utility. On looking at those large magazines wherein monopolizers amass the food and clothing of a whole province, ought we not to bless the hand that created the insect which forces them to sell the grain? If grain were as easily kept as gold and silver, and, if in keeping, it suffered no more alteration, it would presently be as scarce. Behold under how many doors and locks those metals are deposited. The people would, at length, be deprived of all their subsistence, if it were as easily secured as these. The mite and the moth force the miser, in the first place, to employ many hands in stirring and sifting the corn; and, at last, they oblige him to part with it intirely. How many poor would go naked, if the moth did not devour the clothing of the rich! What is most wonderful, is, that, those articles which minister to luxury are not subject to destruction from insects, as are those which minister to the first wants of life.

It

It is possible to preserve, in our climates, where they are luxuries, without any loss, coffee, silk, and cottons, even for ages : but, observe ! in India, where these things are necessary to life, there, God has placed insects who quickly destroy them, particularly cotton.

Insects which attack the human body, in like manner, force the rich to employ those who have nothing as domestics, to preserve cleanliness around them. The *Incas* of Peru even exacted this tribute from the poor, for in all countries insects attack man, though it has been said that, they do not pass the line. Besides, these animals are more tiresome than dangerous : they draw off the bad blood. As they increase immoderately only in hot climates, they invite us to bathe, which practice is exceeding salutary ; but neglected among us, because, being expensive, it is become a matter of luxury. After all, nature has placed other insects near us, which destroy those that are injurious ; these are spiders. I have heard of an old officer, who being much incommoded with bugs, at the hospital of invalids, suffered many spiders to live around his bed, and was thereby delivered from the bugs. This remedy, I am aware, will appear, to many persons, worse than the disease. But, I believe it possible to find others more agreeable in perfumes and oily essences : at least, I have remarked that, the odours of various aromatic plants drive away these disagreeable animals.

Though perfumes may be recommended, occasionally, as the means of quick destruction, the habitual use of them must be exceeding hurtful to our selves. Familiarity with odours destroys the sensibility of the olfactory nerves ; for it may be observed every day that, while a few grains of snuff will cause a fit of sneezing to persons unaccustomed to the use of it, great quantities are taken by others, without producing

ducing any similar effect. Besides, strong perfumes cause the head-ach. But were the practice free from these inconveniences still, it ought not to be recommended to permanent use for the above purposes, because, it releases us from that obligation to cleanliness which the existence of those insects very fortunately imposes. It is the great law of nature that, every particle of matter shall be incessantly rising into life. Were this to cease, corruption must ensue. If we indolently prevent the renovation of life by the use of strong (and, to these insects, poisonous) perfumes, while impurities accumulate around us, consequences much worse than their existence must follow. Nature has provided that every inch of creation shall produce living creatures; and it cannot be beneficial to us to counteract this decree by forming a poisonous atmosphere about our persons. Nature has planted aromatic plants in hot countries, and by the side of waters, as the meadow-sweet of our own brooks, to purify the air; but the constant or indiscriminate use of them in their full strength is injurious.

As to other

CALAMITIES OF NATURE,

man experiences them only because he deviates from her laws. If storms sometimes destroy his orchards and his harvests, it is because he often places them in situations where nature has not destined them to grow. Storms scarce ever injure any thing but the contrivances of man. They seldom hurt forests or natural meadows. Nature commonly elevates a number of trees together, man places them singly. Besides, storms have their use. Thunder refreshes the air. The hail, which sometimes accompanies them, destroys a great number of insects; and storms are most frequent in the seasons when these hatch

hatch and multiply, that is, in the spring and summer. Without the hurricanes of the torrid zone the ants and locusts would render the islands situate between the tropics uninhabitable.

There is absolute necessity for

VOLCANOS,

whose fires purify the waters of the sea, as those of thunder purify the air.

EARTHQUAKES

proceed from the same cause. Besides, nature forewarns us of their effects, and of the places where they commonly happen. The inhabitants of Lisbon well know that their city has been frequently damaged by these shocks, and that it is imprudent to build there with stone. There is nothing to be feared from them in houses of wood. Naples and Portici are not ignorant of the fate of Herculaneum. After all, these tremblings of the earth are not universal: they are local, and periodical. Pliny has observed that, Gaul, or France, was not subject to them, but there are many other countries intirely free. They are seldom felt except in the neighbourhood of volcanos, on the shores of the sea, or great lakes, and only at particular parts of those shores.

The epidemical

MALADIES

of man, and the diseases of animals come from corrupted waters. Physicians, who have investigated their causes, attribute them sometimes to the corruption of the air, sometimes to the mildew of plants, and sometimes to fogs: but all these pretended

tended *causes* are only *effects* of the corruption of the waters which infects the air with vegetables and animals. We may almost always attribute this to the imprudent labors of man. The most unwholesome regions of the earth, as far as I can recollect, are in Asia, on the borders of the Ganges, whence mortal fevers issue every year—that of 1771 destroyed more than a million of lives at Bengal.—These come from the

RICE

plantations, which are *artificial morasses*, formed along the banks of the Ganges, for the sake of cultivating that grain, which thrives in marshy soils. After the grain is gathered, the roots and stalks of the plant which are left, rot, and form infectious puddles all over the stubble, whence pestilential vapours arise. It is to prevent these inconveniences that the culture of rice has been forbidden in various parts of Europe, especially in Russia, in the environs of Orschakof, where it was formerly produced.

In Africa, the air of the island of

MADAGASCAR

is corrupted, and from the same cause, during six months of the year, and will ever present an invincible obstacle to any European establishment. All the French colonies which have settled there perished, one after another, from the corruption of the air; and I, myself, must, with the rest, have fallen a victim to it, had not Divine Providence, by means which I could not foresee, prevented my voyage, and the sojourn which I intended to make there.

It is from the ancient miry canals of

EGYPT

EGYPT

that, the leprosy and pestilence perpetually come forth. In Europe, the ancient

SALT MARSHES

of Bronage, whereto the sea no longer reaches, and where the waters of the rains remain, because they are confined by the dikes and ditches of the old salt pits, are become constant sources of disease among the cattle. Similar diseases, putrid and bilious fevers, and the land-scurvy, annually issue from the canals of

HOLLAND,

which putrify in summer to such a degree, that I have seen the canals of Amsterdam covered with dead fishes; and it was impossible to cross some of the streets without covering the nose with a handkerchief. The people have, indeed, made a kind of current in those stagnant waters by means of wind-mills, which pump them up, and throw them over the dikes, in places where the canals are lower than the level of the sea; but these machines are not sufficiently numerous.

The bad air of

ROME

in summer, comes from its ancient aqueducts, the waters of which are spread among the ruins, or which inundate the plains, the levels of which have been interrupted by the works of the Romans. The purple fever, and other diseases, so common over all our plains, after the heats of summer, or in warm and humid springs, proceed, for the most part,

part, from the puddles of the peasants, in which the leaves and refuse of plants putrify. Many of the distempers of our cities come from the lay-stalls which surround them, and from the cimiteries that are placed round our churches, and, in the very church itself.

I do not believe that, there would have been a single unwholesome spot upon the earth if man had not put his hand to it. The malignity of the air of St. Domingo, of Martinico, of Porto-Bello, and many other places in America, have been spoken of as the natural effects of the climate: but these places have been inhabited by savages who, in every age, have employed themselves in altering the courses of rivers and stopping the currents of the brooks. These works are essential parts of their modes of fortification. They imitate the

BEAVERS

in the defence of their villages, by surrounding them with inundations. It should be observed, however, that, nature has placed beavers only in cold latitudes; where, in imitation of herself, they form lakes which soften the air; and that she has placed running waters in warm latitudes, because, *lakes* would soon change there, by evaporation, into putrid morasses. The lakes which nature has made are among mountains, at the sources of rivers, and under cool atmospheres: I am still the more induced to attribute to the savages the corruption of the air, so deadly in some of the Antilles, because those islands which were found uninhabited were perfectly healthy; as the isle of France, the islands of Bourbon, St. Helena, &c.

It has always appeared to me unaccountable that,
in

FRANCE,

FRANCE,

where there are so many admirable establishments, we should have ministers for foreign affairs, of war, of the marine, finance, commerce, manufactures, the clergy, public buildings, horsemanship, &c. and that there should be none for agriculture. This proceeds, I believe, from contempt for the peasantry. All men, however, are sureties for one another; and, independant of the stature, and uniform configuration of the human race, I ask no other proof that, they come from one only origin. It is from the puddle of the poor man, whose little brook has been turned aside, that disease shall issue to lead the family of the neighbouring villa to the grave. Egypt avenges herself, by the pestilence of her canals, of the oppression of the Turks, who prevent the inhabitants from keeping them in repair. America, fallen under the blows of Europeans, breathes from her bosom a thousand maladies fatal to Europe. She drags down with herself the Spaniard dying upon her ruins. Thus the Centaur left with Deïnira his robe, empoisoned with the blood of the Hydra, as a present that should destroy his conqueror. Thus the evils with which mankind are loaded, pass from hovels to palaces; from the line to the poles; from ages past to ages to come; and their long consequences are awful voices which cry out in the ears of the powerful: "Learn to be just, and not to oppress the unhappy!"

Not only the elements, but reason itself corrupts in the haunts of wretchedness. From the retreats of misery issue forth thefts, murders, incendiaries, highway robberies, revolts, and a multitude of physical evils, which, in all countries, are the consequences of tyranny.

When human policy fastens the chain round the
 ankle

angle of the slave, Divine JUSTICE rivets the other end round the neck of the tyrant.

JUPITER has ordained, say the sacred books of Egypt, that, The evil which a man does to his fellow-creature shall return with sevenfold vengeance upon himself; to the end that, No man shall find his own happiness in the misery of another.

END OF THE SIXTH STUDY.

SEVENTH

SEVENTH STUDY.

HARMONY OF NATURE.

WHEN Nature opposes contraries to each other, painful affections are excited in us; and, when she mingles them, we experience agreeable ones. Discord proceeds from the opposition of contraries, and harmony from their re-union.

Let us search in Nature for some proofs of the existence of this great law. Cold is opposed to heat, light to shade, water to earth; and the harmony of these contrary elements produces delightful effects; but if cold hastily follows heat, or heat, cold; the greater part of vegetables and animals, exposed to these sudden revolutions, run the risk of perishing. The light of the sun is agreeable; but if a black cloud intermingles with the brightness of his rays; or if brilliant fires burst from the depth of shade, such as those of lightning, our eyes suffer painful sensations. The terror of the thunder storm is increased if, to the loud peals, intervals of profound silence are added; and this terror is redoubled if the oppositions of these fires and darkneses, of these tumults, and peaceful intervals, occur during the gloom and silence of night.

Nature, in a similar manner, opposes on the

SEA,

the

the white foam of the waves, to the black colour of the rocks, to announce, from afar, to seamen, the dangers of the shallows. Frequently, these rocks convey the idea of destruction by their very forms: such as those of ferocious beasts, of edifices in ruin, or the keels of vessels overset. She even causes hollow noises, resembling groans, to issue at long intervals from these objects. The ancients believed that they saw, in the Rock of Scylla, a female of hideous form, whose girdle was surrounded by a pack of dogs incessantly barking. Our seamen have given to the breakers of the Bahama channel, so famous for ship-wreck, the name of the *martyrs*, because they exhibit through the spray of the billows which break upon them, the frigid spectacle of men impaled and exposed on wheels. They even think that they hear sighs and sobbings issue from these melancholy rocks.

Nature likewise employs these harsh oppositions, and these dismal signs, to express the characters of cruel and dangerous beasts of all kind. The lion, wandering by night in the solitudes of Africa, announces his approach by distant roarings, which strongly resemble the rolling of thunder. The vivid and momentary fires which flash from his eyes in the dark, give him in addition, the appearance of the meteor, lightning. During Winter, the howlings of the wolves, in the forests of the north, are like the groanings of the winds that agitate the trees: the cries of the birds of prey are shrill, sharp, and interrupted with deep tones. Nay, there are some which utter the accents of human sorrow. Such is the lom, a species of sea-fowl, who feeds on the dead bodies of animals on the shallows of Lapland: he cries like a man that is drowning.

But, when two contraries are blended together, of whatever kind they may be, we see pleasure,
beauty,

beauty, and harmony produced. I call the instant and point of their union—*harmonic expression*. This is the only principle which I have been able to perceive in nature.

OF THE COLOURS EMPLOYED BY NATURE,

J. J. ROUSSEAU observed to me one day, that, though the field of the celestial colours is blue, the tints of yellow which mingle with them, do not produce a green colour, as happens in our material colours, when these two shades are blended. But I replied that, I had frequently perceived green in the Heavens, not only between the tropics, but over the horizon of Paris. This colour is in truth seldom seen by us, except on some fine summer evening. In the clouds of the tropics, I have likewise seen all the colours perceptible on earth, particularly at sea, and during tempests. They are then of a copper colour, others of the smoke of tobacco, brown, redish, black, grey, chefnut, vivid, and the colour of a burning oven. As to those which appear there in fine weather, they are so lively and so brilliant, that, no palace can ever be equally splendid, though enriched with all the gems of the Mogul. Sometimes the *trade-winds* of the north and south-west, which constantly blow there, card the clouds, as if they were skins of silk; then drive them away to the west, crossing and re-crossing them, like the osiers of a basket. They throw upon the sides of this chequer work, the clouds which they have not yet employed, and these are not few in number; they roll them in enormous masses white as snow, draw them out in the form of cruppers, and pile them one upon another, like the cordeliers of Peru; moulding them into the shape of mountains, of caverns, and of rocks: afterward, toward evening, they calm a little, as if fearful of destroying their work,

work. When the sun comes to set behind this magnificent net-work, you see a multitude of luminous rays passing through the meshes, which produce such an effect that, the two sides of the lozenge which they brighten, seem retired with threads of gold, and the two others, which are in shadow, are tints of superb orange. Four or five streams of light rise from the

DECLINING SUN

toward the middle of the Heavens : clothe the indetermined summits of this celestial barrier, with fringes of gold, and cast upon the pyramids of the aerial mountains the reflections of their fires ; transmuting the dim vapours, into silver and vermilion. It is at this moment, that you see in the middle of their redoubled heights, a multitude of valleys extending into nothingness, distinguishing themselves at their opening by shades of salmon, or rose, colour. These celestial valleys present, in their various *contours*, inimitable tints of white, melting into other whites, or shades which pass over shades, without mingling themselves. Here, and there, you see rivers of light precipitating themselves from the cavernous sides of these mountains, in liquid gold and silver. upon rocks of coral. Here you see, dark rocks pierced through, and discovering through their apertures the pure blue of the firmament ; there, long shores, and sands, of gold, stretching over the rich ground of heaven, poppy-coloured, scarlet, and green as the emerald. The reverberation of these western colours, spread themselves over the sea, whose azure waves it glazes with saffron, and with purple. The seamen, leaning over the gun-wale of the ship, admire in silence these aerial landscapes. Sometimes, this sublime spectacle presents itself to them at the hour of prayer, and
seems

seems to invite them to lift their hearts, with their voices, towards the Heavens. It changes every moment: that which was luminous is, presently, only simply coloured; and that which was coloured, is now in shadow. The forms are as variable as the shades; they are by turns islands, hamlets, hills planted with palm trees, grand bridges stretching over rivers, fields of gold, of amethysts, of rubies; or rather, they are nothing of all this: they are celestial forms and colours, which no pencil can imitate, nor no language describe. O, my countrymen, would you see these nights; would you travel to the tropics, to behold the beauties of Nature? Your labour is unnecessary; from your own windows, your own villages, your own gardens, you may frequently see evening skies as splendid, and, always, productions that deserve your admiration.

It is very remarkable that, all travellers who have, at various seasons, climbed the highest mountains of the globe, between the tropics, and without the tropics, in the middle of continents, or of islands, have perceived in the clouds which were beneath them, only a grey and lead-like surface, without variation of colour, resembling that of a lake. The sun, notwithstanding, illuminated those clouds with his whole light; and his rays could there combine, without any obstruction, all the laws of reflection to which our physics have subjected them. It follows from this observation, that, there is not a single shade of colour uselessly employed in the whole universe; that, the celestial decorations are made for the level of the earth; and that, their most magnificent point of view is from the habitation of man.

Of moral uses take the strife;
leave me the elegance of life.

F

whatever

whatever charms the ear or eye,
 all beauty, and all harmony ;
 if sweet sensations these produce,
 I know they have their moral use :
 I know that NATURE's charms can move
 the springs that strike to VIRTUE's love.

FABLES OF FLORA.

These admirable concerts of lights and forms, which manifest themselves in the lower region of the clouds, where they are least illumined by the sun, are produced by laws which are entirely unknown to me. But, let their variety be what it may, the whole are reducible to five colours; white; yellow, which seems to proceed from white; red, a deepened shade of yellow; blue, a very strong tint of red*; and black, the deepest tint of blue. This progression cannot be doubted, if the developement of light in the morning skies is observed; you see there these five colours, with their intermediate tints, producing one another very nearly in the following order: white, brimstone-yellow, lemon-yellow, yolk-of-egg-yellow, aurora-colour, poppy-red, purple, violet, azure, indigo, and black: each of these colours seems to be a only a strong tint of that which preceded it, and a lighter tint of that which follows: thus the whole, together, seem only gradations of one progression, of which white is the first colour, and black the last.

In this order, of which the two extremes are white and black, that is to say, light and darkness, producing in harmony so many different colours, you will remark that, the

RED

colour holds the middle place; and that, it is the most beautiful in the opinion of every people. The

* *Prussian blue* is made from the blood of the ox.

Russians,

Russians, to say that a girl is *beautiful*, say that she is *red*. They call her *crastna devitsa*; for, with them, *beautiful* and *red* are expressed by the same word. In Mexico and Peru, red was very highly esteemed. The most magnificent present which the emperor *Montezuma* could think of giving to *Cortez*, was a necklace of lobsters, which were of that rich colour. The only request made to the Spaniards by the king of Sumatra, upon their first landing in his country, and presenting him with many specimens of the commerce and industry of Europe, was, for a few corals and scarlet-coloured stuffs; and he promised them, in return, all the spicery, and other Indian merchandize, for which they might have occasion. The traffic with the Negroes, the Tartars, the Americans, and the East-Indians, is carried on very disadvantageously, unless scarlet stuffs are employed. The testimonies of travellers are unanimous as to the preference given by all nations to this colour. I could collect an infinite number of proofs, were I not afraid of being tedious. I have indicated the universality of this taste only, to shew the falsehood of that philosophic axiom, which says that, taste is arbitrary: or, which is the same thing, that, there is in nature no laws for beauty; and that, our taste are the consequences of prejudice. The direct contrary of this is, however, the truth: it is prejudice that corrupts our natural taste, which would otherwise be similar all over the earth. It is the result of prejudice that, the Turks prefer the green to every other colour; because, according to the traditions of their divines, that colour was the favorite of Mahomet; and because his descendants are the only persons among the Turks that have the privilege of wearing the *green* turban. But, from another prejudice, the Persians, their neighbours, despise *green*, because they reject this tradition, and refuse to acknowledge

the affinity of the prophet; being sectarians, the followers of Ali. Owing to another chimera, *yellow* appears, to the Chinese, the most distinguished of all colours, because it is that of their emblematic dragon. Yellow is the imperial colour in China, as green is in Turkey. Notwithstanding this, and in support of our opinion, the Chinese represent their gods, and heroes on the stage, with their faces stained with blood colour. All these nations regard red, the political colour excepted, as the most beautiful; which is sufficient to establish the universality of their preference.

But, without dwelling any longer on the variable testimonies of men, that of nature will be sufficient. It is with red that nature heightens the finest parts of the most beautiful flowers. She has entirely covered the rose with it, which is their queen: she has given this colour to the blood, which is the principle of animal life: she has invested the greatest part of the birds in India with plumage of this colour. There are few birds to whom she has not given some tint of this rich colour. Some have their heads covered with it, like those which are called *cardinals*; others have breast-plates, collars, hoods, or shoulder-knots. There are some, the ground of whose plumage is entirely of a grey, or brown colour, but which are glazed with red, as if they had been rolled in carmine. Others are sprinkled with red, as if scarlet powder had been blown over them. With this, small white spots are intermingled, which produce a charming effect. A little bird of India, called *bengali*, is thus painted.

But nothing is more lovely than a

TURTLE DOVE

in Africa, who bears on his pearl-grey plumage, precisely over the place of his heart, a blood-red spot

spot, made up of different shades. exactly resembling a wound. It seems as if this bird, who has been dedicated to love, wore the livery of his master, and had served as a mark for his arrows. What is still more wonderful, these rich colours generally disappear from the plumage of birds after the season of spring, as if they were robes of state which nature lends them only for that occasion..

END OF THE SEVENTH STUDY.

F 3

EIGHTH

EIGHTH STUDY.

CONTRASTS IN THE WORKS OF NATURE.

CONTRASTS differ from *contraries* thus: white is the *contrary* of black; but it *contrasts* with blue, green, red, and various other colours.

Nature, to make her works distinguished, causes them to contrast with each other. This law is so much the less observed the more common it is. We tread the grandest and most admirable truths under foot, and pass them without any regard.

All naturalists consider the colours of bodies as simple accidents; and the greater part of them look upon their forms, even as the effects of some attraction, chrySTALLIZATION, &c. Books are every day written to extend, by analogies, the mechanical effects of those laws to the various productions of nature; but if attraction, chrySTALLIZATION, &c. have really so much power, why has not the sun, that universal agent, filled the heavens, the waters, the land, the forests, the fields, and all creatures, over whom he has so much influence, with the uniform and monotonous effects of his light? All these objects ought to appear white, or yellow, like himself, and to be distinguished from each other only by their shadows. Landscapes ought to exhibit

hibit no other effect than those of a cameo or a print, where every thing is formed with different tones of the same colour, as in an Indian-ink drawing. Latitudes, we are told, vary colours; but if latitudes have this power, why are not all the objects of the same climate—or, at least, of the same garden, of the same colour? Why are not quadrupeds, who are born and who live in the meadows, why are these not green like the herbs that nourish them?

Nature is not contented with establishing particular harmonies in each species of creatures in order to characterize them, but, that they might not be confounded among themselves, she makes them contrast with one another. She has, in general, made herbs green to separate them from the colour of the earth; afterward, she has given the colour of the earth to animals who live on the herbage, to distinguish them, in their turn, from the turf on which they live. We may remark this general contrast among herbivorous quadrupeds, such as domestic animals, the yellow beasts of the forests; and in all granivorous birds, who live on the herbage, or on the foliage of the trees; as the yard fowl, the partridge, the quail, the lark, the sparrow, &c. who are of earthy colours, because they live among verdure. But those, on the contrary, who live on brown grounds, have brilliant colours, as the thrush, the tit-mouse, and the woodpecker, who creep along the bark of the trees in search of insects, &c.

Nature every where opposes the colour of the animal to that of the ground on which it lives. This admirable law is universal. I shall give a few examples here, to put the reader in the way of observing these ravishing harmonies of which he may find proofs in every climate. There is seen on

the shores of India, a large and fine bird, white and fire-coloured, called the

FLAMINGO,

which appears at a distance like a flame. He commonly lives in swampy grounds and salt-marshes, amid the waters of which he builds his nest, raising a little hillock of mud. He makes a hole in the summit of this little turf: the hen lays two eggs, and hatches them with her feet sunk in the water, owing to the extreme length of her legs. When many of these birds are sitting on their nests in the middle of a swamp, they look like flames of fire ascending from the bosom of the waters. Other birds present other contrasts upon the shores. The

PELICAN,

or, *Wide Throat*, is a large bird, the colours of which are white and brown; he has a capacious bag under his beak, which is very long. He goes out every morning to fill his bag with fishes; and when he has completed his fishery, he perches upon some point of a rock on the level of the water, where he continues immoveable till evening, says *Father des Tertne*, as exceeding sorrowful, his head drooping with the weight of his long beak, and his eyes fixed on the agitated ocean, and as motionless as if himself were marble.' On the brown strands of those seas may frequently be seen

HERONS,

white as snow; and in the azure plains of heaven, the

PAILLENCU

PAILLENCU,

of a silver white, flying till he is lost to the sight: he is sometimes glazed with rose-colour, with the two long feathers of his tail coloured like fire, as those of the South-Sea.

Frequently, the deeper the colour of the ground, the brighter are the colours of the animal that lives upon it. We have not perhaps in Europe any insect of richer and gayer clothing than the beetle and fly, which are sometimes called *May*, and *June*, *Bugs*, and which live on dunghills. One is more bright than burnished gold and steel, the other of a fine purple blue, and to render the *contrast* more complete, he exhales a strong and agreeable odour of musk.

Nature, however, seems to deviate sometimes from this law, but then it is for other reasons of adaptation, according to which all our plans are adjusted. Thus, after having contrasted those animals who are capable of making their escape from every danger, by their strength or their agility; after having contrasted these with the ground on which they live, she has confounded those with it whose slowness, or whose weakness, gives them up to the discretion of their enemies. The

SNAIL,

who has no sight, is of the colour of the bark of the trees which he eats, or of the wall on which he takes refuge.

FLAT-FISHES,

which swim badly, as the turbot, the flounder, the plaice, the burt, the soal, &c. which are formed like planks, because they are destined to live a

sedentary life beneath the depth of the sea ; are of the colour of the sands where they find nourishment, being spotted, like the beach, with grey, yellow, black, red, and brown. It is true they are thus speckled only on one side ; but so well do they know the use of their colours, that, when they find themselves inclosed within the parks which are made on the shores, and when they feel the tide about to retire, they bury their fins in the sands, waiting for the next tide, and presenting to the eye of man only their deceitful side. They resemble the ground on which they are concealed so completely, that it would be impossible for the fishermen to distinguish them without the help of sickles, with which they trace lines in every direction on the surface of the sand, to discover by the touch that which they could not see. I have witnessed this myself several times, more astonished at the dexterity of the fishes than at that of the fishermen. The

THORNBACK,

on the contrary, which is one of the flat fishes, and bad swimmers, but which is carnivorous, are marbled brown and white, to the end, that, they may be perceived from far by the other fishes ; and that they may not themselves be devoured by their enemies, which are very alert, as sea-dogs, or by those of their own species, who are exceedingly voracious, Nature has covered them with thorny points, particularly on the hinder part of their body, as the tail, which is most exposed to attack when they are pursued. Thus, for the sake of the fishes which the thornbacks eat, their colours are made conspicuous, and because this circumstance exposes them in a particular manner to their own enemies, they are provided with thorns.—Nature, you see, is just.

The more completely to defend

HARMLESS

HARMLESS ANIMALS,

Nature has given them, at once, contrasts with the ground on which they live, and similarity or consonance to that with which they may easily resort; and, besides, she has given them sufficient understanding to enable them to employ these alternately, according to the good or bad fortune which attends them. We may remark these wonderful adaptations in the greater part of our small birds, whose flight, is feeble, and of little continuance. The

GREY LARK

seeks her food among the herbs of the field. Is she frightened? she glides away between two clods of earth, where the similarity of her colour renders her invisible. In this retreat she remains so tranquil that, she scarcely quits it when the foot of the pursuer is upon her. The partridge acts in the same manner. I have no doubt that these birds, who are destitute of other defence, understand these contrasts, and harmonies of colour: for I have remarked it even in insects. In the month of March last, I observed on the brink of the river, at Gobelins, a

BUTTERFLY,

of a brick colour, who reposed with his wings expanded on a tuft of grass. I approached him, and he flew away. He alighted at some little distance on the ground, which, at that place, was of his own colour. I came near to him again; he took a second flight, and alighted again on a similar strip of earth. In a word, I never could force him to settle on the grass, though I made frequent attempts, and though the spaces of earth that were between the plots of turf were narrow, and few in number.

number. As to other animals, this astonishing instinct is very evident in the

CAMELEON.

This species of lizard, which is extremely slow in its progress, is indemnified for this disadvantage by an incomprehensible faculty of assuming, at pleasure, the colour of the ground by which he is surrounded. With this advantage he escapes from the sight of his enemies, who would soon overtake him by their speed. This faculty is in his will, for his skin is not a mirror. Though it partakes of the colour of objects it does not reflect their forms. What is most remarkable in this animal, and well attested by naturalists, who have not, however, assigned any reason for it, is that, he takes all colours; as brown, grey, yellow, and, most frequently, green, which is his favourite colour; but never red. Camaleons have been placed among scarlet stuffs during whole weeks without partaking of that colour in the smallest degree. Nature seems to have refused this conspicuous colour, because it would only serve to make him perceptible at a greater distance; and besides, there is no earth, or vegetable, of that colour, to which this animal naturally resorts. So that, in giving him the power of assuming the red colour, Nature would have bestowed a useless present, and defeated her own purpose.

But, during the age of weakness and of inexperience, and of infancy. Nature makes the colours of all animals resemble that of the places which they inhabit, without leaving it to themselves to provide for moments of danger. Young

PIGEONS

and most of the granivorous birds, are covered with

with greenish, or yellow hairs, like the moss with which their nests are made. Caterpillars are blind, and their colour is the same as that of the bark, or the leaves on which they feed. The young fruit, even, which are not yet armed with thorns, as the horse-chestnut, inclosed in cases, with bitter pulps, or or hard shells, to protect their seeds, are, during the time of their growth, green as the leaves which surround them. Some young fruits, it is true, as certain pears, are reddish, or brown; but, in this case, they are of the colour of the bark of the tree whereon they grow. When these fruits have enclosed their seeds in kernels, or, in nuts, and are out of danger, they change colour. They become yellow, blue, golden, red, black, and give the natural and beautiful contrasts to the plants which bear them. It is very remarkable that, every fruit which has changed colour has its seeds in a state of maturity.

INSECTS,

in the same manner, having shaken off their infantile dresses, and being given up to their own discretion, spread themselves over the world to multiply its harmonies by the variety of their colours, and of their instincts. It is then that, the colours of

BUTTERFLIES,

who, when caterpillars, were confounded with the verdure of the plants, come to oppose the hues and forms of their wings to those of the flowers: the red to the blue, the white to the red; *antennæ* to *stamina*, and *fringes* to *corollas*. One day I admired one of these insects, whose wings were azure, sprinkled with spots of aurora colour, as he reposed himself on the bosom of a full blown rose. He seemed to dispute the praise of beauty with the rose.

It

It would have been difficult to say to which the prize belonged: the butterfly or flower? But, on seeing the rose crowned with *lapis lazuli*, and the azure butterfly seated on a cup of carmine, it was easy to observe that, their charming contrast increased each other's beauty.

Nature has imparted none of these adaptations and agreeable contrasts to

HURTFUL ANIMALS,

nor to dangerous vegetables. Of whatever kind the carnivorous or venomous animals may be: they form, at all ages, and wherever they are, harsh and disgusting oppositions. The white bear of the north, prowling over the snow, gives warning of his approach by hollow groanings, by the blackness of his nose, and of his paws, and by his throat and eyes, of the colour of blood. Those ferocious beasts who seek their prey in the midst of darkness, or in the depth of forests, announce their approach by roarings, by lamentable cries, by eyes flashing fire, and by foetid odours. The

CROCODILE,

in ambush upon the shores of the rivers of Asia, where he looks like a trunk of a tree thrown down, fills the air, at a great distance, with a strong odour of musk. The

THE RATTLE-SNAKE

concealed in the marshes of America, sounds his rattles as he moves beneath the grass. Even those insects which make war upon others, are clad in
dismal

disfmal colours, harshly opposed, where black predominates, and clashes with white or yellow. The

HUMBLE-BEE,

independent of his drowsy murmur, is known by his black corselet, and his large belly, bristled over with yellow. He appears among the flowers like an half extinguished coal. The carnivorous

WASP

is yellow, and striped with black, like the tyger. But the

HONEY-BEE

is of the tint of the *stamina*, and the bottom of the *calices* of flowers, where she reaps her innocent harvests.

DANGEROUS PLANTS

present, like noxious animals, disagreeable contrasts in the livid colours of their flowers ; where black, dark blue, and smoky violet, are in harsh opposition with softer shades ; in nauseous and virulent smells ; in prickly leaves of a black green, opposed by white on the underside : such is the *aconite*. I do not recollect any other plant so hideous as are those of that *family* ; and, particularly, the *napel*, which is the most poisonous plant of our climates. I do not *know* that their fruits exhibit, from the first moment of their developement, harsh opposition which announce their evil character : if they do so, they have this farther resemblance to the young of ferocious beasts.

Animals which live in two different situations, have two contrasts in colour. Thus, for example, the

KING'S

KING'S-FISHER,

which skims along rivers, is at once musk-coloured, and glazed with azure: so as to be detached from the brown shores by his azure colour, and from the water by his musk colour. The

DUCK,

who paddles on the same banks, has a body tinted with ash-colour, and his head and neck have the greenness of the emerald. Thus he is perfectly distinct, by his grey colour, from the weeds and flags among which he paddles, and by his green head and neck, from the dark mud wherein he searches for food; and in which, by another astonishing contrast, he never soils his plumage. The same contrast of colour is exhibited in the

WOOD-PECKER,

who lives upon the trunks of trees, along which he climbs to search for insects in their bark. This bird is both brown and green; so that, though he lives, we may say, in the shade, he is always perceptible, nevertheless, upon the trunks of the trees: for he detaches himself from their dusky bark by that part of his plumage which is of a brilliant green, and from the verdure of their mosses, and of their lichens, by the ground-colour of his feathers, which is brown.

Nature opposes, then, the colour of every animal to that of the place in which he lives; and what confirms the truth of this law is that, the greater part of birds which live on one ground only, have but a single colour, and that *one* strongly contrasted with the colour of the ground. Thus, the
birds

birds who live on the azure ground of heaven, aloft in the air ; or on the waters, in the middle of lakes, are mostly white, which of all colours, forms the most striking contrast with blue, and it is, consequently, best adapted to render them perceptible at a distance. Such are, between the tropics, a bird of white satin, which flies high in the air, the heron, the gull, the sea-mew, which skim along the surface of the azure deep, who swim in fleets upon the extensive lakes of the north,

There are others, likewise, that, to form contrasts with these, detach themselves from the heavens or the waters, by black or brown, colours : such are, for instance, the crow, which is perceptible at a great distance on the white ground of the clouds ; many sea-fowls of a brown and blackish colour : as the

FRIGAT

of the tropics, which plays through the air, amidst storm and tempest ; the mower, or sea-cutter, a marine bird, which grazes with his dark-coloured wings, the white surface of the foamy billows of the ocean.

We may infer, from these observations, that, when an animal has one only colour, he lives only in one situation ; and, when he has in himself a contrast of two opposite colours, that he lives upon two grounds, the colours of which may be ascertained by the colours of the animal's fur, or plumage. In the mean time we must not apply this law too generally ; but allow for those exceptions which wise Nature has established for the preservation of particular animals ; such as clothing them in white, for the most part, in the north, in winter, and upon the tops of mountains. She does this to preserve them from an excess of cold : and their white clothing

ing answers this purpose by reflecting the greatest quantity of heat*. On the other hand, the em-browns them in the south, in ardent summer, and on burning sand, to shelter them from too great heat, by means of absorbing colours. What evidently proves that these great effects of harmony are not mechanical results from the influences of the material objects which surround these animals, or the action of the rays of the sun, according to our pretended philosophy, is that, among the almost infinite number of birds who pass their time aloft in the air, or, upon the surface of the waters, which are azure, there is not one whose colour is blue; and, on the other hand, many of those birds who live between the tropics, on the ridges of black rocks, or in the shade of dark forests, are of the azure colour: such are the pullet of Batavia, which is intirely blue; the Dutch pigeon of the Isle of France, &c.

We may draw from these observations another consequence equally important: it is that, all these harmonies are adapted to man. A blue bird upon the ground of heaven, or, on the surface of the waters, would escape our sight. Nature has, besides, reserved the richest and most agreeable colours for those birds which live in our neighbourhood. This is so true that, though the sun acts between the tropics with the whole force of his rays on the

* Snows, and frosts are for this reason white. Nature has provided to counteract the extremes of heat and cold. In hot countries every thing has a tendency to coolness, and in cold climates every thing contributes to warmth. For these purposes snows descend, and the leaves fall from the trees, which would otherwise obstruct the little sunshine that is given.—In direct opposition to these laws of Nature, for *Nature* is thought an ignorant savage, unblest with civilisation, the general practice of the commonalty, at least, is, to wear light coloured clothing in summer, and dark in winter.

birds of the wide ocean, there is not one whose plumage is adorned with fine colours; while those birds who live on the shores of the sea, and on rivers, are, in many instances, magnificent. The *flamingo*, a large bird, that lives in the marshes of the southern ocean, has a white plumage, dipped in carmine. The

TOUCAN,

on the same shores, has an enormous bill of the liveliest red, and when he retires from the humid sands, wherein, with help of his large bill, he finds subsistence, you might suppose that he had fished out a branch of coral. There is another species of *toucan* whose beak is white and black, polished as if it were ebony and ivory. The *pintada*, with speckled plumage, the peacock, the duck, the kingfisher, and a multitude of other river-birds, embellish, by the enamel of their colours, the banks of the rivers of Asia, and of Africa. But no plumage, comparable with these, is to be seen in the open sea, however exposed to the influence of the sun.

It is from a similar adaptation to man that, Nature has bestowed sweet notes and melodious voices upon the little birds who are near our habitations. Sea-fowls, and birds of prey, have loud screaming voices, that they may be heard by one another at great distances, amid contrary winds, and in wide expanded places, where there is no inclosure to stop, and to return the sound.

Every department of Nature exhibits the same attention to man as in those parts which are particularly presented to his eye. The fishes which live on flesh, as all the cartilaginous, do, such as the seal, the sea-dog, the shark, the flipper, the thornback, the polypus, and many others, have disgusting

ing forms and colours. Fishes which live in the open sea, have marbled colours, black, white, and brown, which distinguish them in the bosom of the azure waves: such are the whale, the blower, the porpoise, and others. But it is among those that live on the brown shores, and particularly in the number of such as are denominated *saxatile*, because they live among rocks, that, we find those the lustre of whose skin and scales surpasses the richest painting, especially while alive. It is thus that legions of mackarel and herrings give to the northern strands of Europe the radiance of silver.

It is around the black rocks which border the seas of the tropics, that the fish known by the name of

CAPTAIN

is caught. Though his colours differ in different latitudes, it will be sufficient, in order to give an idea of his beauty, to cite the description which has been given of him by *Francis Cauche*, in his account of Madagascar. He says that, this fish, which loves the rocks, is striped in the form of lozenges; that his scales are of a pale gold colour, and that his back is coloured and glazed over with lake, approaching, in several places, to vermillion. His dorsal fin and tail are waved with azure, inclining to green, toward the extremities.

It is likewise at the feet of the same rocks that the magnificent fish, called the

SARDIN

is found. It is adorned with scales of a gold and silver hue, crossed from head to tail by black lines which admirably heightens the lustre. This fish is found on the coast of Brasil, where there are, also, a number of species of the

MOON-FISH.

For my own part, I have amused myself, on the rocks of the Island of Ascension, in observing, for hours together, the moon-fish sporting amid the tumultuous waves which are incessantly breaking upon them. These fishes, of which there are various species, have the round and, sometimes, sloping, form of the star of night, whose name they bear. Like her, they resemble burnished silver. They seem made to deceive the fishermen in every particular; for their bellies are streaked with black stripes, in lozenges, which makes them appear as if they were caught in a net; every instant they are upon the point of being cast ashore by the motion of the waves wherein they play; they have so small a mouth that they frequently eat the bait without biting the hook; and their skin without scales, like that of the seal, is so hard that, the three-pronged harpoon often strikes in vain, though keenly whetted. *Francis Cauche* says that, it requires considerable exertion in order to cut their skin with the sharpest knife*

When you see a brilliant fish, you may assure yourself that, he lives near the shore; and, on the contrary, if his colour is dull, that, he inhabits the wide ocean.

Is it not strange that, when so many plants and so many animals present us with such fine conformations, and adaptations to our wants, so admirable, and proofs so evident of divine benevolence, there should be persons who collect mishapen creatures, pigs with snouts lengthened in probosces, as if our

* This excessive hardness of the skin of these fishes seems a provision against the blows which they must frequently receive while tossed about by the waves in shallows.

yards were filled with little elephants ; and who place them with much parade in cabinets which are said to be intended to assist the Study of Nature ? Those who treasure up these things, and thence draw their inferences, and their doubts concerning the wisdom of the Creator, have they not a vile taste, and a certain malicious tincture in their minds ? and do they not act like one who should rake among the refuse of a pottery, and pick up figures and vessels accidentally spoiled, and shew them as proofs of the ignorance of the artist ? The ancients burned monsters ; the moderns preserve them. These resemble wicked children, who delight to find their mother in fault, to supply themselves with an excuse for doing wrong. Ah ! if the earth were, indeed, given up to disorder, and if, though not till after an infinity of combinations, there should appear, at last, amid the monsters that covered every side, but one well-proportioned body, adapted to the necessities of man ; what joy would it not give to susceptible and unhappy beings, to discover that, There is somewhere an Intelligence that is attentive to their condition !

| END OF THE EIGHTH STUDY.

NINTH

NINTH STUDY.

CONCERTS IN NATURE.

CONCERT is an order composed of *several harmonies of various kinds*. It differs from simple order, in that this last is often only a *series of harmonies of one kind*. Every individual work of Nature presents, in different kinds, harmonies, consonances, contrasts, and forms a real concert. We may remark, on the subject of these harmonies, and of these contrasts, that, those vegetables whose flowers are least striking, are inhabited by animals of brilliant colours, and that, those vegetables, whose flowers have most lustre and colour, serve as an asylum for dusky animals. This is very observable in the countries between the tropics, where few of the trees or plants have apparent flowers, and where birds, insects, and even monkeys of so lively colour are found. It is in the plains of India that, the peacock displays his magnificent plumage on the shrubbery of which the verdure is destroyed by the sun; it is in the same climates that the arras, the lauris, and parrots, enamelled with a thousand colours, perch on the grey branches of the palm trees; and that clouds of little perroquets, green as emeralds, feed on fields yellowed by the long heats of summer.

In our temperate regions, most of the birds
are

are of dull colours, because the greater part of our plants have flowers of lively colours. It is very remarkable that, those of our birds, and of our insects who have gay colours, live, in ordinary, on vegetables without apparent flowers. Thus the heath-cock shines on the grey verdure of the pines, the apples of which serve him for food. The goldfinch builds his nest on the rugged fullers-thistle. The gayest of our caterpillars, which is marbled with scarlet, is found upon a species of tithymal, which grows, in general, in sandy places and in the quarries of the forest of Fontainebleau. On the contrary, our birds of dusky tints, inhabit shrubs with gay flowers. The black-headed bull-finch builds his nest in the white-thorn, and that lovely bird makes very agreeable consonance and contrast with this thorny shrub, by the redness of his breast, and the sweetness of his song. The nightingale, with her brown plumage, loves to nest in the rose bush, according to the traditions of oriental poets, who made many pretty fables on the loves of this melancholy bird for the rose.

We always find, in the cells of the

MOLE,

fragments of the bulbous root of the *colchica*, close by the nest of her young: now, if you examine all the plants which usually grow in our meadows, you will find none which forms more harmonies with the black colour of the mole, than the white flowers, purple and lilachy, of the *colchica*. This plant is, also, friendly to the mole, by affording a powerful means of defence against his natural enemy, the dog, who is always hunting after him in the meadows: for, if he eats of the *colchica* he is poisoned. It is for this that the *colchica* is called *dog-bane*. The mole finds food, then, and protection against his enemies

enemies in the *colchica*, as the bullfinch does in the white thorn. These harmonies are not only agreeable objects of speculation ; we may make them very useful : It follows, for example, from what we have said, that, to invite the bullfinch to a shrubbery, you should plant the white-thorn ; and that, to drive away the moles from a meadow, you should destroy the bulbs of the *colchica*.

If you add to each plant its elementary harmonies, such as, the season in which it appears, the site on which it grows, the effects of the dews, and the reflexes of the light upon its leaves, the motion to which it is liable from the action of the winds, the contrasts and consonances with other plants, and with the quadrupeds, the birds, and the insects which belong to them, you will see a delightful concert formed around, the accords of which are still unknown. This is the track, however, that we must follow, if we would have a glimpse of the immense and wonderful edifice of Nature. I exhort naturalists, lovers of gardens, painters, and poets, thus to study, and to take frequent draughts at this everlasting source of taste and pleasure. They will see new worlds presenting themselves. Without leaving their own horizon, they will make discoveries more curious than many of those which are contained in our books, and in our cabinets, where the productions of the universe are presented piece-meal, and placed by themselves in the little drawers and boxes of our mechanical systematisers.

I do not know, now, what name I ought to give to the adaptations which these particular concerts have with man. It is certain that there is no work of Nature but which strengthens its natural character by connecting itself with the habitation of man, and which does not add, in its turn, to that habitation, some expression of grandeur, gaiety, terror,

ror, or majesty. There is no meadow which is not made more chearful by a dance of thepherdessees, nor no tempest which is not rendered more terrible by the wreck of a vessel. Nature raises the physical character of her works into a sublime moral character, by uniting them round mankind.

When Nature means to express the maleficent character of a venomous plant, she assembles clashing oppositions of forms and colours, which are the signs of maleficence; such as retreating and bristly forms, livid colours, dark greens, with white and black spots, virulent odours. But, when she means to characterise whole districts which are unhealthy, she assembles a multitude of similar dissonances. The air is filled with thick fogs, the turbid waters exhale nauseous smells; no vegetable thrives on the putrid earth, except such as are disagreeable: the dragunculus, for instance, the flower of which exhibits the form, the colour, and the smell of an ulcer. If any trees arise in its cloudy atmosphere, it is the yew, whose red and smoaky trunk, seems to have been in fire, and whose black foliage is the abode of the owl only. If some other animals are to be seen seeking refuge under its shades, they are the centipeds, of the colour of blood, or toads, crawling on the humid and rotten ground. It is by these signs, or others, equivalent, that, Nature frightens man away from situations that are not fit for him.

Would she give him warnings at sea of a

TEMPEST?

as she has opposed, in ferocious beasts, the glare of the eyes to the thickness of the eye-brows, the stripes and marblings with which they are distinguished, to the yellow colour of their skins; the
silence

silence of their motions to the roarings of their voices ; so, she collects in the sky, and on the waters, a multitude of clashing oppositions, which announce, in concert, the destruction. Dark clouds cross the air in the horrible forms of dragons. Here and there, you see the paly fires of lightning bursting out. The noise of the thunder, which is carried in the clouds, resembles, as it were, the roarings of the celestial lion : the day-star, which can scarcely be seen through their rainy and numerous veils, sends forth long rays of a sickly light. The leaden surface of the sea, scoops and swells into large white foams. Dismal groans seem to arise from the waves. The black shallows whiten at a distance, and utter frightful noises, interrupted by as horrid silences. The sea, which covers, and now, discovers, them, shews to the light of day their cavernous foundations. The lom of Norway perches upon a point of the rocks, and you hear his alarming cries, and fancy that a man is drowning. The sea-ospray rises aloft into the air, and, fearful of abandoning herself to the impetuosity of the winds, she struggles, uttering plaintive cries, against the blast that bends her wings. The black *procellaria* flies along, grazing the foam of the billows, and seeking in their transient valleys, shelter from the fury of the wind. If this small and feeble bird perceives a ship amid the ocean, she comes for refuge along its side, and, as a recompence for the asylum which she asks, she announces the tempest before it arrives.

Nature always apportions the signs of destruction to the greatness of the danger. Thus, for example, the signs of a tempest off the coast of the Cape of Good Hope, surpass, in many respects, those of our coasts. The celebrated *Vernet*, who has given us so many terrifying pictures of the sea,

has not painted all its horrors. Every storm has its particular character in every latitude : those of the tempests of the Cape of Good Hope are not like those of Cape Horn, nor of the Baltic like the Mediterranean, nor the Bank of Newfoundland like the coast of Africa. They vary also with the seasons, and even with the hours of the day. Those of summer are not the same as those of winter ; and the sea agitated, shining at noon day, under the beams of the sun, is a different spectacle from that of the same sea illuminated in the middle of the night by a single flash of lightning. But, in all, you may observe the clashing oppositions which I have mentioned.

I have remarked one particular respecting the tempests of the Cape of Good Hope, which admirably supports all that I have heretofore advanced upon the principles of discord and harmony, and which may give birth to deep reflection in some one that is possessed of more information than myself. It is that, Nature often accompanies the signs of violent storms, that overturn the ocean, with agreeable expressions of harmony, which redoubles the horror. Thus, for example, in the two tempests which I have experienced, I have not seen the heavens obscured by dark clouds, nor the clouds broken by momentary flashes of lightning, nor a sea dirty and lead-coloured, as in the tempests of our climates. The heavens, on the contrary, were of a fine blue, and the sea azure-coloured ; there were no other clouds in the air than little red vapours, dark in their centre, and illumined at their edges with the yellow brilliance of polished copper. They came from a single point of the horizon, and traversed the air with the rapidity of a bird. When the lightning broke our main-mast in the middle of the night, it did not make any other noise

noise than that of a cannon that seemed to be discharged close to our ship. Two other explosions which had preceded this, had made similar noises. This tempest happened in the month of June ; that is to say, in the winter of the Cape of Good Hope. I experienced another in re-passing it in January, that is, in the middle of its summer. The colour of the sky was blue, as in the former instance ; and I saw only five or six clouds on the horizon ; but each was black, white, cavernous, and of enormous magnitude. They resembled a part of the Alps, suspended in the air. This tempest was much less violent than the other with its little red vapours. In both, the sea was azure, like the sky ; and on the vast billows, fringed with foam, tri-coloured rainbows were formed. These tempests, in clear days, are more frightful than I can express them. The soul is perplexed to see the signs of fine weather mingled with those of the tempest ; the azure in the heavens, and rainbow on the waves. The principles of harmony seem destroyed ; Nature seems to clothe herself with treachery, and to cover her fury with the appearance of benevolence.

Nature employs these horrid contrasts, to keep men away from perilous places. In all the rest of her works she assembles only harmonic mediums. I shall not engage in the examination of their various concerts, which is a rich, inexhaustible topic. It will satisfy my ignorance if I indicate some of their principles. I shall attempt, however, to trace a slight sketch of the harmonies of our

HARVESTS,

which, being the works of our agriculture, appear to be given up to that monotony which characterizes the operations of man.

It is remarkable that, our corn exhibits, during its

growth, that delightful shade of the green which results from the mixture of two opposite primordial colours; these are yellow and blue. This harmonic colour, is in its turn, decomposed by another metamorphosis, when, toward reaping time, three primordial colours appear. These are: the yellow ears, the red of the poppies, and the azure of the corn-bottles. These two flowers are always found among the corn of Europe, with whatever care the labourer may dress and winnow the grain. Mingling together, they form a very rich purple, which is seen to great advantage on the yellow harvest. If we examine these flowers separately, we shall find in them many particular contrasts with each other; for the corn bottle has jagged leaves, and those of the poppy are large and divided: the corn bottle has corollas of leaves spread out in rays, and of a delicate blue; and the poppy has large leaves of a deep red. The corn-bottle sends out its branches in a divergent direction, and the poppy carries them upright. Besides these, we find among the corn, another which rises to the height of its ears, with beautiful purple, trumpet-formed flowers, and the flesh-coloured convolvulus that climbs up their stalks, and and entwines them with verdure like *thyrses*. There are still many other plants which commonly mingle themselves, and form many agreeable contrasts. The greater part exhale sweet odours: and when the winds agitate them, you imagine, in their undulations, a sea of verdure, and of flowers. Add to this, a certain rustling of the ears of corn, that is extremely agreeable, and that, by its soft murmurs, inclines you to sleep.

These delightful forests are not without inhabitants. Beneath their shades you see the green and golden beetle, and the monoceros of the colour of burnt coffee. There are, besides, many charming contrasts among the flies and butterflies that are attracted

tracted by the flowers of the corn-field, and in the manners of the birds that inhabit it. The swallow, with untired wings, grazes incessantly along its undulating surface, as if it were a lake, while the sedentary lark rises from beneath, singing, within sight of its nest. The domestic partridge, and the traveller quail, there equally nourish their young. Frequently a hare places her lair in their neighbourhood, and peacefully partakes their food.

These animals are usefully related to man, as food and as clothing. It is very remarkable that they are found in every corn-field in Europe; and that, their species are varied according to the different situations which men inhabit: for the different species of quails, of partridges, swallows, and hares, for plains, mountains, meadows, forests, and rocks.

As to the corn, it has innumerable connections with man, and with domestic animals. It is neither too high nor too low, but admirably adapted to their height. It is easily reached and gathered. It gives grain to his fowls, straw to his swine, forage and litter to his horse and to his ox. Every plant that grows among it, has virtues particularly adapted to the maladies to which the peasantry are subject. The wild poppy cures the pleurisy, and it induces sleep; it stops bleeding;—The corn-bottle is a diuretic, a styptic, a healer of wounds, and a cordial; it cures the bites and stings of venomous animals, and the inflammation of the eyes. Thus a labourer finds his whole *materia medica* in his corn-field.

The culture of corn presents other agreeable concerts with human life. Its shadow shews to the husbandman the hour of the day, and its growth the progress of the seasons: he reckons his fugitive years only by innocent harvests: his labours are always exceeded by the blessings of Nature. As soon as the sun is in *virgo*, he assembles his relations, he invites his neighbours; and at day-break he accom-

panies these, with his sickle in his hand, into the ripened field. His heart palpitates with joy, as the sheaves accumulate ; and his children dance around him, crowned with corn-bottles and with poppies : their plays bring back to his mind those of his early years, and the memory of his beloved parents, whom he hopes to see again in a more happy world. He doubts not that he has a God, under whose eye are his harvests : and at the recollection of the sweet epochs which they bring to his mind, he thanks him for having bound together the fleeting society of man, by an eternal chain of benefits.

Flowery meadows, majestic and murmuring forests, mossy fountains, wild rocks, abodes of the solitary dove, lovely solitudes, that delight us by ineffable concerts ; happy is he that may lift the veil that hides your sacred charms ! but, still more happy he that may enjoy your peaceful blessings !

END OF THE NINTH STUDY.

TENTH

TENTH STUDY.

OF THE SENTIMENTS OF THE DIVINITY,
AND OF OUR MISERY.

EVERY nation has the sentiment of the existence of God : not that they raise themselves to him as Newtons, or, as Socrates, by the universal harmony of his works, but, rather by fixing their attention on those blessings which interest them most. The Indian of Peru worships the sun ; the Indian of Bengal, the Ganges, which fertilizes his fields ; the black Jolof, the ocean which cools his shores ; the Samoïede of the north, the rein-deer that feeds him ; the wandering Iroquois prays to the spirits of the lakes and of the forests, for successful fisheries and chaces.—Many nations adore their kings.

While this sentiment constantly reminds men of their excellence, there is another which is incessantly making them feel their misery. The conflicts of these two sentiments produce the varieties and contradictions of human life.

It is our sentiment of misery, that leads us with so much avidity to whatever offers an idea of asylum and protection ; of ease, and of accommodation. See now why it is that the greater part of men fix their ambition upon tranquil retreats, abundance, and all the treasures which liberal Nature presents upon the

earth, to minister to our wants. It is this sentiment which renders the peaceful citizen so anxious for accounts of court intrigues, narratives of battles, and descriptions of tempests, because the report of dangers at a distance increase the pleasures of internal security. This sentiment often mingles itself with the moral affections. It inclines us to seek support in friendship, and encouragement in praises. It is this sentiment which makes us attentive to the promises of the ambitious man, when we follow him eagerly, and like slaves, implicitly, seduced by the idea of protection with which he baits us. Thus the sentiments of our misery is one of the most powerful bonds of political society, though it attaches itself to the earth.

The sentiment of the DIVINITY pushes us forward in another direction. It was this which conducted love to the altar, and inspired its first vows. It renders love sublime, and friendship generous. It succours the unhappy with one hand, and opposes the other to tyrants: it is the moving principle of generosity, and of every active virtue. Satisfied with serving mankind, it seeks not their applause. When it shews itself in the arts, or, in the sciences, it is the nameless charm which delights us, and when it is absent, insipidity diffuses itself around them. It is this sentiment which renders those men of genius immortal, who have discovered in Nature new proofs of wisdom.

When these two sentiments cross each other, that is to say, when we attach the divine instinct to perishable objects, and the sentiment of our misery to things divine, our life becomes agitated by contradictory passions. Behold the cause of so many hopes, and frivolous fears, which torment mankind. 'My fortune is made,' says one, 'I have a competence *for ever*:' and the next day he dies. 'How miserable am I!' says another, 'I am undone'

‘done *for ever* ;’ and presently death releases him from all his sorrows. ‘We are bound down to life by the merest trifles,’ said *Michel Montaigne*, ‘by a glass.’ Yes, because on that glass is impressed the sentiment of infinity. If life and death often appear insupportable to men, it is because they wrongly associate the idea of their *end* with that of their *death*, and the idea of *immortality* with that of their *life*. Mortals, if you would live happily, and die with tranquillity, do not oppose your laws to those of Nature : consider that, in death, all our animal cares come to an end, the wants of the body, diseases, persecutions, calumnies, bondages of all sorts, the rude conflict of the passions with thyself, and with others : consider that, at death, all the pleasures of a moral being begin ; the recompense of virtue, and of the slightest acts of justice and humanity ; acts despised or disdained by the world, but which have, in some degree, placed you near, even while on the earth, to a Being righteous and eternal.

When these two instincts unite, in the same place, they give us the greatest pleasures of which we are susceptible ; for, then, our *two natures*, if I may use the expression, are gratified at once. We are going to present a slight assemblage of their harmonies.

I suppose you, reader, wearied with the miseries of society, seeking toward the coast of Africa, some happy spot, unknown to Europeans. Your vessel, sailing on the Mediterranean, is cast, late in the evening, upon a coast, where it is shipwrecked. Heaven so willing, you gain the land. By the glare of the lightning you discern a grotto at the end of a little valley. Sheltered in this asylum, you listen all night to the pealing thunder, and to the rain, which falls in torrents. At dawn you see, behind you a girdle of lofty rocks, as steep as walls. From their bases arise, here and there, clumps of

fig-trees, covered with white and purple fruit, and tufts of *carobs*, loaded with brown pods: the summits of the rocks are crowned with pines, wild olives, and cypresses, half bent by the violence of the winds. The echos of the rocks repeat, in the air, the confused murmurs of the tempest, and the hoarse noises of the raging ocean, which you perceive at a distance. But the little valley wherein you are, is the abode of peace and rest. In its mossy sides the sea-lark builds her nest, and on the solitary shores the mavis waits the ending of the storm.

Now the first fires of Aurora beam over the flowery *stachys*, and the violet beds of thyme, which cover the hills. The light enables you to perceive upon the summit of a neighbouring eminence, a cottage, overshadowed with trees. The door opens, and from it comes a shepherd, his wife, and his daughter, who take the path toward the grotto, carrying vases, and baskets upon their heads. Is it the sight of your misfortune that has drawn these good people near you. They bring you fire, fruits, bread, wine, and clothing. They are eager to pay you the duties of hospitality. The wants of the body being satisfied, you feel those of the soul: you cast your eyes toward the sea, and you endeavour within yourself to discover upon what part of the world it is that you are thrown: but the shepherd releases you from your perplexity, by saying: ' That island which you see far northward is Mycone. You see Delos a little to the left, and Paros is before you. This, on which we stand, is Naxos: you are in that part of the island where

ARIADNE

- * was formerly abandoned by Theseus. It was on
- * that long bank of white sand, which advances be-
- * low

low us into the sea, that, she passed the days, looking at that part of the horizon wherein the vessel of her faithless lover disappeared from her sight; and it was in the grotto, where you now are, that, she retired, during the nights, to weep for his departure. To the right, between two little hills, stood a flourishing city, called Naxos. The women, who inhabited it, touched by the misfortunes of the daughter of Minos, came to find her, and to comfort her. At first they endeavoured to amuse her by conversation; but nothing could please her but the name and remembrance of Theseus. Then, the ladies counterfeited letters from that hero, full of affection, and addressed them to Ariadne. They ran to deliver them to her, saying: "Be comforted, lovely Ariadne, Theseus will soon return; Theseus always thinks of you." Ariadne, transported, read the letters, and, with a trembling hand, hastened to answer them. The Naxians carried her replies, and promised to send them speedily to Theseus. In this manner they deceived away her grief: but when they perceived that the sight of the sea plunged her into deep melancholy, they drew her into those extensive groves which you see below in the plain. There they invented every species of merriment to relieve her depression. Sometimes they formed choral dances around her, and represented, by joining their hands, the windings of the labyrinth of Crete, from which the happy Theseus escaped by her assistance: sometimes they pretended to kill the terrible monster, Minotaur. Ariadne's heart expanded with joy at beholding spectacles which represented the power of her father, the glory of Theseus, and the triumph of her own charms, which had repaired the destiny of Athens: but when the winds, notwithstanding the sounds of the tabor and the pipes, brought to her ears the distant noise of the billows,

“ lows, which broke upon the shore, wherefrom she
“ saw the cruel Theseus depart, she turned toward
“ the sea, and burst into tears. They endeavoured,
“ therefore, to remove Ariadne from these places,
“ and these sounds. They persuaded her to come
“ into their city, where they provided grand feasts,
“ in magnificent halls, supported by pillars of gra-
“ nite. There, no man was permitted to enter, no
“ noise from without could be heard. They had
“ covered the pavement, the walls, the doors, and
“ the windows with tapestry that represented mea-
“ dows, vineyards, and agreeable solitudes. The
“ place was illuminated with a thousand lamps and
“ torches. They made Ariadne sit down in the
“ midst of them on cushions; they placed a crown
“ of ivy, with its black berries, upon her flaxen
“ hair, and round her pale forehead; then they set
“ urns of alabaster at her feet, that were full of ex-
“ cellent wines: they filled golden cups, and pre-
“ sented them to her, saying, “ Drink, lovely daugh-
“ ter of Minos, this island produces the finest gifts
“ of Bacchus. Drink; wine dissipates sorrow!”
“ Ariadne, smiling, yielded to their intreaties. In
“ a little time the roses of health re-appeared upon
“ her face, and speedily it was rumoured in Naxos
“ that, Bacchus had come to the succour of the
“ lover of Theseus. The inhabitants, transported
“ with joy, erected a temple to that god, some
“ columns, and the frontispiece of which, you see
“ upon that rock, in the midst of the waves. But
“ Ariadne was at length consumed by her regrets,
“ and even by her hopes. See, at the extremity of
“ the valley, upon a little hillock, covered with sea-
“ wormwood, is her tomb, and her statue still look-
“ ing toward the sea. That monument, like every
“ other in this country, is mutilated by time, and
“ still more by barbarians; but the memory of suf-
“ fering virtue is not at the disposal of tyrants. The
“ tomb

‘ tomb of Ariadne is with the Turks, and her crown:
‘ is among the stars..

‘ As for us, escaped from the eye of the powers
‘ of the world, through our obscurity itself, we
‘ have, by the goodness of Heaven, found liberty at
‘ a distance from the great, and happiness in the de-
‘ serts. Stranger, if the gifts of Nature still touch
‘ you, you may freely partake them with us.’

During this recital, tears of compassion flow from the eyes of his wife, and of his young daughter, who sighs at the remembrance of Ariadne: and I doubt whether an atheist, himself, who discovers in Nature the laws of matter and motion only, could be insensible to the feeling of the harmonies present, and to the recollections of the past.

Voluptuous men! It is only Greece, you say, that offers scenes and points of view so touching as this! Hence Ariadne is in every garden, Ariadne is in every collection of pictures. From the window of your villa cast an eye over your estates; their hills present more beautiful horizons than those of desolate Greece. Your apartment is more commodious than a grotto, and your sofas are softer than the turf. The undulation and the murmurs of your corn and full-grown hay are more agreeable than those of the waves of the Mediterranean. Your money and your gardens produce a greater variety of wines and fruits than are to be found in all the Archipelago. Would you mingle the delights of gods with these your pleasures? behold, upon yonder hill, that little village church, surrounded by ancient beech-trees. Among the girls who assemble under its rustic porch, no doubt, there is some Ariadne. She is not marble; but she is alive: she is not a Greek, but she is your countrywoman; she is not consoled, but despised by her companions. Go into her poor dwelling; soothe her misery! Do good in this life, that passes away as a torrent! Do good,

good, not through ostentation, and by the hands of strangers; but for Heavens sake, and in your own person. The fruit of virtue loses its bloom when gathered by the hand of another. Ah! if you, yourself, solace her afflictions, if, by your compassion, you lift her up to the respect of society, you will see, at the reception of your kindness, her face covered with blushes, her eyes filled with tears, her lips moving convulsively, without speaking, and her heart, long time oppressed with shame, recovering itself at the sight of its benefactor, as with an inward feeling of divinity. You will then perceive in the human form some traits unknown to the chissel of the Greeks, or, to the pencil of the Vandycks. The happiness of an unfortunate will cost you less than the statue of Ariadne; and, instead of illustrating the name of an artist during a few years, it will immortalise your own. Long after you are no more, she that you relieved will say to her companions, and to her children; "He " was a god that lifted me up from my misery!"



END OF THE TENTH STUDY.

THE

THE
CHILDREN
OF THE
COTTAGES.

“ A tale of rural life, a tale of woes.”

BEATTIE.

ADVERTISEMENT.

THE following little story is an abridgement of the tale of PAUL and VIRGINIA. Every part of that composition which appeared unadapted to the destination of the present volume, has been wholly omitted.



THE

THE
CHILDREN
OF THE
COTTAGES.

CHAPTER I.

ON the eastern side of the mountain which rises behind Port Louis, in the Isle of France, are to be seen, upon a spot of ground that was formerly cultivated, the ruins of two little cottages. They stand almost in the centre of a basin formed by vast rocks, which has only one opening, and that is toward the north. From that opening you perceive, on the left, the mountain which is called Mount Discovery, whence signals of vessels approaching the island are repeated; and, at the bottom of this mountain, the city called Port Louis; to the right, the road which leads from Port Louis, the part called *Pamplemousses*; afterward, the church of that district, which rises, with its avenues of bamboos, in the middle of a great plain; and beyond this, a forest, which spreads to the extremities of the island. In front, on the brink of the ocean,
you

you have a view of Tomb-bay ; a little to the right, Cape Misfortune, and, beyond that, the boundless sea, in which appear, scarcely above the waters-edge, some uninhabited little islands : among these is Mire Point, which looks like a bastion amid the restless waves.

At the entrance of this basin, from which a prospect so various is beheld, the echoes of the mountain incessantly repeat the noise of the winds which rustle through the neighbouring forests, and the roaring of the billows, which break, at a distance, upon the shallows ; but close to the cottages no noise is to be heard, and all around, nothing is to be seen but stupendous rocks, as steep as walls. Tufts of trees grow at their bases, in their clefts, and up to their very summits, on which the clouds seem to repose. The rains, which are attracted by their peaks, frequently paint the colours of the rainbow on their green and dusky sides, and perpetually supply the sources of the small river *Lataniers*. Deep silence reigns in this inclosure, where all is peaceful : the waters, the air, the light. Scarcely does the echo repeat the murmuring sound of the palmists, upon whose elevated stalks the long branches are always seen balanced by the winds. A mild light illumines the bottom of this basin, into which the rays of the sun descend only at noon day ; but, from the first dawn, they strike upon the brim of it ; and the loftiest summits, which are above the shadows of the mountains, present their gold and purple heads amid the azure heavens.

I was fond of retiring to this place, where, at once, may be enjoyed the most unbounded prospect, and the profoundest solitude. One day as I was sitting by the platform of these cottages, contemplating their ruins, a man, advanced in years, happened to pass that way. He was dressed, as usual, with ancient inhabitants of the island, in a short jacket,

jacket and long trowsers. He walked barefooted, and leaned upon a staff of ebony-wood. His hair was completely white, his countenance simple and majestic. I saluted him respectfully. He returned my salute, and having looked at me during a few moments, he approached, and sat down upon the hillock beside me. Emboldened by this token of confidence, I took the liberty of addressing him in these words :

“ Can you tell me, father, to whom these cottages belonged ? ”

“ My son,” he replied, “ these ruins, and that neglected spot of ground, were inhabited, about twenty years ago, by two families, who there once found happiness. Their history is pathetic, but in this island, situated on the road to India, what European will interest himself in the fate of a few obscure individuals ? Nay, who would submit to live here, even happily, if poor and unknown ? Men are desirous of only knowing the history of the great, and of kings.”

“ Father,” replied I, “ it is easy to discern from your air, and your conversation, that you have acquired great experience. If you have leisure, relate to me, I beg, what you know of those who formerly inhabited this deserted place ; and be assured, that there is no man, not even the most depraved by the prejudices of the world, but who loves to hear of the felicity which Nature and Virtue bestow.”

Upon this, after having put his hands for some time to his forehead, like one who is trying to recollect certain circumstances, the old man told me what follows.

CHAPTER

CHAPTER II.

ABOUT the year 1735, a young man of Normandy, called *De la Tour*, after having, to no purpose, solicited employment in France, and assistance from his family, resolved to come to this island, hoping to make his fortune. He brought with him a young wife, whom he dearly loved, and who returned his affection, and a little child, their daughter. He left her at Port Louis, in this island, and embarked for Madagascar, proposing there to purchase some negroes, and to return immediately to this place, to fix his habitation here. He disembarked at Madagascar, during the dangerous season, which commences about the middle of October, and soon after died of the pestilential fever, which rages there during six months of the year, and which will always prevent European nations from forming settlements upon that island.

The effects which he had carried with him were embezzled after his death, as commonly happens to those who die in foreign countries. His wife, who remained in the Isle of France, found herself a widow, and destitute of every earthly resource, except a negro woman, in a country where she was entirely unknown. Unwilling to solicit assistance from any one, she derived courage from her misfortunes. She determined to cultivate, with the help of her slave, a small piece of ground, in order to obtain subsistence.

In an island that was at that time almost in its primitive state of wildness, the soil of which belonged to no one in particular, she did not chuse the most fertile situation, nor that which was most favourable to commerce: but searching for some sequestered recess of the mountain, some obscure shelter; she found her way from the city to these rocks, and sunk into them as into a nest. It is an instinct which all creatures who have sensibility possess, under the pressure to calamity, to seek refuge in the rudest, and most solitary places; as if rocks were bulwarks against misfortune, or, as if the calmness of nature could tranquilise the troubles of the soul. But Providence, who comes to our relief when we desire only necessary comforts, had in store for *Madame de la Tour*, a blessing which riches cannot give, nor grandeur bestow. It was a friend.

There had resided in this place, during a year past, a chearful, good, and sensible woman, called *Margaret*. She, too, was unfortunate. An old black slave, called *Domingo*, whom she had purchased with a borrowed purse, cultivated, with herself, a small corner of this district. This poor woman no sooner knew the friendless situation of *Madame de la Tour*, than she offered to her the accommodation of her cottage, and the assistance of her friendship. *Madame de la Tour*, deeply affected by this tenderness, exclaimed:—"I see that God has inspired you with sentiments of great kindness towards me, and is going to bring my sufferings to an end!"

I myself had the felicity of *Margaret's* acquaintance; and though I reside at the distance of a league and an half from this place, I considered myself as her neighbour. In the cities of Europe, a street, a mere partition, separates the members of the same family for years: but in the new colonies, we regard those as neighbours whom only woods and mountains part. At that time, particularly
when

when this island had little commerce with India, neighbourhood was a title to friendship, and hospitality to strangers, was considered as a duty and a pleasure.

As soon as I was apprised that my neighbour had a companion, I went to see her, and to offer to both every service in my power. I found in Madame, *de la Tour*, a person of a very interesting figure; full of dignity and melancholy. I said to the two ladies, I thought it would be better for the sake of their children, for *Margaret* had a son, who was about twelve months older than the daughter of Madame *de la Tour*—it would be better for the sake of their children, and especially to prevent the establishment of any other inhabitant, to divide between them the territory of this basin, which contains about twenty acres. They entrusted me with the charge of making this division; I formed it into two portions, as nearly equal as I could. One contained the upper part of that inclosure from yonder point of the rock, covered with clouds, whence issues the source of the river of the *Lataniers*, to that steep opening which you see at the top of the mountain, and which is called the *embrasure*, because it actually resembles the parapet of a battery. The bottom of this spot of ground is so full of rocks and gutters that, it is scarcely possible to walk along. It produces large trees, nevertheless, and is full of fountains and little rivulets. In the other half I comprized all the lower part of the inclosure, which extends along the river of the *Lataniers*, to the opening where we are now seated, whence the river begins to flow between two hills toward the sea. You see there a few stripes of meadow ground, and a soil tolerably smooth, but which is very little better than the other: for, in wet seasons, it is marshy, and in drought, hard as lead.

When

When you wish to open a trench, you are obliged to cut it with a hatchet.

After making these two divisions, I persuaded the ladies to settle their possessions by lot. The upper part became the property of *Madame de la Tour*, and the lower that of *Margaret*. They were both intirely satisfied : but they requested me not to separate their habitations, “in order,” they said, “that we may have it in our power to see, to converse with, and to assist each other.” It was necessary, however, that each should have a separate retreat. The cottage of *Margaret* was built in the middle of the bason, exactly upon the boundary of her own domain. I built near to this, upon the land of *Madame de la Tour*, another cottage: so that the two friends were, at once, in the vicinity of each other, and upon the estate of their families. I myself cut palisadoes in the mountains, and from the sea-side I brought the leaves of the *Latanier*, to construct these two cottages which now, you see, have neither door nor roof. Alas ! still there remains too much to awaken my memory. Time, which destroys, so rapidly, the monument of empires, seems to respect, in these deserts, those of friendship, to perpetuate my sorrow to the close of my life.

CHAPTER III.

THESE two little cottages began to be tolerably comfortable, partly by aid of the attention which I was able to bestow, and more particularly by the assiduous labour of the slaves. *Domingo*, whom we have already mentioned, was an *Iolof* Black, still robust, though rather aged. He had experience, and good natural sense. He cultivated both shares of the ground without distinction; taking that which appeared to him to be most fertile; and then he sowed the seeds for which he thought it best adapted. He sowed small millet and India corn, in places where the soil was of an inferior quality, and a little wheat where the ground was good: rice in marshy places; and at the foot of the rocks were raised *giramonts*, gourds, and cucumbers, which delight in climbing up their sides: in dry places he planted potatoes, to which moisture is always destructive, and which acquire, in the driest situations, singular sweetness. Upon heights he cultivated cotton trees, and, on strong land, sugar-canes: coffee plants upon hills, where their grains are small, but excellent: along the river and around the cottages, bananas, which, all the year round, produce plentiful supplies of fruit, and supply beautiful shelter; and, in a wood, some plants of tobacco, to sooth his own cares, and those of his good Mistresses. He cut wood for fuel in the mountains, and broke down pieces of rocks, here and there,

there, in the plantation, to smoothe the paths. He was very much attached to *Margaret*, and little less so to *Madame de la Tour*, whose slave, *Mary*, he had married, and whom he passionately loved. She was a native of Madagascar, whence she had brought some mechanic arts, particularly, that of making baskets, and stuffs, called *pagnes*, with the grass that grows in the wood. She was clever, cleanly, and, above all, perfectly faithful. Her business was, to prepare the victuals, to breed some poultry, and sometimes to go to Port-Louis, to sell the superfluity of the two plantations, which was very inconsiderable. If to these persons you add, in your imagination, two goats, brought up with the children, and a great dog, that watched by night, out of doors, you will have an idea of all the possessions, and of all the domestic economy of these two little farms.

As for *Madame de la Tour* and *Margaret*, they spun cotton from morning till night. This employment enabled them to maintain themselves, and their families: but, in other respects, they were so badly provided with commodities, which they could not make, that, they walked barefooted when at home, and never wore shoes except on Sundays, when they went to mass, early in the morning, at the church of Pamplemonsses, which you see in the bottom. That church is, indeed, much farther off than Port-Louis: but they seldom visited the city, for fear of being treated with contempt, because they were clothed in the coarse blue linen cloth of Bengal, which is worn by slaves. But what is public respectability, compared with domestic felicity? If these ladies were exposed to some mortification, when abroad, they returned home with so much more additional satisfaction. Their reception at home formed a favourable contrast with that abroad. No sooner did *Mary* and *Domingo* perceive

them, from this eminence, on the road from Pamplemonsses, than they flew to the bottom of the mountain, in order to assist them in re-ascending. In the eyes of these they read their joy at beholding them again. They found in their habitation, cleanliness and freedom; blessings which they owed entirely to their own industry, and servants full of zeal and affection. For themselves, united by the same wants, having experienced evils almost similar, giving to each other the soft names of friend, companion, and sister; they had but one will, one interest, one table. Every thing which they possessed, was in common.

CHAPTER IV.

NOTHING, indeed, was comparable with the attachment which their children evinced for each other. If *Henry* happened to complain, they shewed *Jeanette* to him: at the sight of her he smiled, and was pacified. If *Jeanette* was in pain, you were told of it by the lamentations of *Henry*; but that amiable child immediately concealed her illness, that he might not afflict himself on her account.

When they were able to speak, the first names which they learned to give each other, were those of brother and sister. Infancy, which bestows the tenderest caresses, knows of no names more sweet. Very soon, every thing that regarded economy, cleanliness, the care of preparing a rural repast, became the occupation of *Jeanette*, and her labors were always followed by the praises of *Henry*. As for him, ever active, he digged, with *Domingo*, in the garden, or, with a little hatchet in his hand, followed him into the woods: and if, in these rambles, a beautiful flower, or a delicious fruit came in his way, though at the top of a tree, he procured it, to carry it to his sister.

When you met one of them any where, you were sure that, the other was near. One day that I was coming down this mountain, I perceived *Jeanette* at the extremity of the garden: she was running toward the house, her head covered with her petti-

coat to shelter her from the rain. At a distance I thought that she had been alone : but having drawn near, in order to assist her, I perceived that she held *Henry* by the arm, who was almost enveloped in the same covering ; both of them delighted at finding themselves sheltered together under an umbrella of their own invention.

All their study was to please, and to assist each other : in every other respect they were as ignorant as Creoles, and knew not how to read or to write. They did not disturb themselves about what had happened in former times, and at a distance ; their curiosity did not extend beyond that mountain. They believed that the world ended at the extremity of their island, and they could not form an idea of any thing beautiful which they had not seen. Their mutual affection, and the affection of their mothers, engaged every energy of their hearts. They knew not that it was unlawful to steal, for what they possessed belonged to all ; nor to be intemperate, having always plenty of wholesome food : nor to utter falsehood, because they had no truths that it was necessary to conceal.

Thus passed their early infancy, like a beautiful dawn which promises still a more beautiful day. They already divided with their mothers the cares of the household. As soon as the crowing of the cock announced the return of morning, *Jeanette* rose, went to fetch water from a neighbouring spring, and returned to the house to prepare breakfast : soon after, when the sun had gilded the peaks of those incircling rocks, *Margaret* and her son went to the dwelling of *Madame de la Tour*, where they immediately began a prayer, which was followed by their first repast : this they often enjoyed before the door, seated on the grass, under a bower of bananas, which provided them, at the same time, with ready-prepared food, in their substantial fruit,
and

and table-linen in their long and polished leaves. Their meal frequently passed without a word being uttered. Their silence, the simplicity of their attitudes, the beauty of their naked feet, would have tempted you to believe that you beheld an antique groupe of marble, representing two children of Niöbe.

CHAPTER V.

THE good dispositions of these children developed themselves from day to day. One Sunday, at sun-rise, their mothers being gone to the first mass, at the church of Pamplémonsses, a fugitive negro-woman made her appearance, under the bananas that surrounded their habitation. She was as meagre as a skeleton, and without any clothing, except a shred of tattered cloth. She cast herself at the feet of *Jeanette*, who was preparing the breakfast of the family, and said, “Young lady, take
“pity on a miserable slave! For a month past I
“have been wandering about these mountains, half
“dead with famine, and frequently pursued by
“huntsmen, and by their dogs. I have fled from
“my master, who is a rich planter on the *Black-*
“*River*: he has treated me in the manner you
“see.”

At the same time, she shewed deep furrows made by the lashes of the whip upon her body: she added,
“I was going to drown myself; but, seeing your
“dwelling in the valley, I said, perhaps there are
“still some good white people in this country. I
“am not to die yet.

Jeanette was much moved: she replied, “Be
“comforted, miserable creature! eat, eat;” and
she gave her the breakfast which she had prepared
for the family. The slave devoured the whole of it
in a few moments. *Jeanette*, seeing her refreshed,
said

said to her, "Poor wretch! I should like to go to
" your master, and implore of him to pardon you:
" when he sees you he will certainly be touched
" with compassion: will you shew me the way?"

"Angel of God!" replied the negress, "I will
" follow you wherever you will."

Jeanette called her brother, and begged him to accompany her. The fugitive slave conducted them, by paths, to the middle of the woods, across mountains, which they climbed with difficulty, and great rivers, which they forded.

CHAPTER VI.

IT was almost noon when they arrived at the bottom of a mountain, upon the banks of the Black-River. They perceived a well-built house, large plantations, and many slaves, occupied with different employments. Amid these, the master walked with a pipe in his mouth, and a cane in his hand. He was a very tall, lean, man, of an olive complexion, with his eyes sunk in his head, and his eye-brows black, and meeting each other. *Jeanette*, almost petrified at seeing him, held *Henry* by the arm while she approached, and intreated him, for the love of God, to pardon his slave, who was at the distance of some paces behind them. The master did not, at first, pay any attention to the children, who were but poorly clothed; but, when he observed the beauty of *Jeanette*, her fine flaxen hair, which appeared from under a blue hood, and when he had heard the sweet sound of her voice, which trembled like the rest of her frame, while she solicited his pardon, he took the pipe from his mouth, and, lifting his cane toward heaven, he declared, with a dreadful oath, that he *would* pardon his slave, not for the love of God, but for the love of her. *Jeanette* immediately made a sign to the slave that she might advance toward her master; she fled away herself, and *Henry* followed her.

They remounted, together, the mountain which they had descended; and, having gained its summit, they

they sat down under a tree, overcome by fatigue, by hunger, and by thirst. They had performed a journey of more than five leagues, since the rising of the sun. *Henry* said to *Jeanette*, "Sister, it is past noon, you are hungry and thirsty; we shall find no dinner here; let us go down the mountain again, and get something to eat from the master of the slaves."

"Oh, no!" replies *Jeanette*, "he has terrified me too much. Do you remember what mamma sometimes says, The bread of the wicked fills the mouth with gravel."

"What shall we do then?" said *Henry*, "these trees produce no fruits that we can eat. Here is not a single tamarind nor lemon to refresh you."

"God will have pity on us," replied *Jeanette*, "he hears the voices of the little birds when they ask him for food."

Scarcely had she said these words when they heard the noise of water which fell from a neighbouring rock. They ran toward it immediately, and having satisfied themselves with water clearer than crystal, they gathered, and ate, a few of the cresses which grew in its channel. As they were looking about for more solid food, *Jeanette* perceived, among the trees of the forest, a young palm-tree. The cabbage which the head of that tree incloses in the middle of its leaves is very good to eat; but though the stem was not thicker than a man's leg, its height was more than sixty feet. The wood of this tree is formed, indeed, only of a bundle of filaments, but its pith is so hard that, it repels the best hatchets, and *Henry* had not even a knife. An idea came into his head that, he might fell the tree by setting fire to its foot; but in this, too, he was embarrassed: he had no steel, and, besides, in this island, so covered with rocks, I do not believe that a piece of flint is to be found. Ne-

cessity creates industry, and frequently the most useful inventions have come from the most miserable men. *Henry* tried to light a fire after the manner of the blacks. With the point of a stone he made a little hole in the branch of a tree that was very dry. Then, with the edge of the stone, he contrived to make a point to a piece of another branch, that was equally dry, but of a different kind of wood. Afterward, he applied the point to the hole in the dry branch which he held under his feet, and spinning it round with great rapidity, as a chocolate mill is trundled, he presently saw smoke and sparks of fire, produced. He gathered dry leaves, and branches of trees, and kindled a fire at the foot of the palm-tree, which soon fell, with great noise. The fire now assisted him in extricating the cabbage from its envelopement of long woody, and sharp leaves. *Jeanette*, and *Henry*, ate a part of the cabbage in its raw state, and the remainder they dressed under the hot embers, and thought both their dishes exceeding savory. Their humble repast was attended with considerable hilarity. Their pleasure consisted in the recollection of their good action in the morning; but it was mixed with the uneasiness which they feared that their mothers would suffer on account of their long absence. *Jeanette* frequently recollected this, while *Henry*, who now felt his strength restored, assured her that they should soon arrive, and restore the tranquillity of their mothers.

After dinner, they found themselves exceedingly embarrassed; for they had now no clue by means of which they could find their way homeward. *Henry*, whom nothing could cast down, said to *Jeanette*:
“Our cottage is toward the mid-day sun; we must
“pass, as we did in the morning, over the mountain which you see below, with three peaks.
“Come, let us walk.”

They descended then down the north side of the
mountain

mountain of the black river that stopped their way. This principal part of the island, covered with forests, is so little known, even now, that many of its rivers and mountains are not yet named. The river, upon the banks of which they were, ran, bubbling, over a bed of rocks. The noise of the water terrified *Jeanette*. She dared not trust her feet to pass through the shallow stream. *Henry* immediately took her upon his back, and, thus loaded, stepped over the river, from one slippery rock to another, regardless of the tumult of the waters.

“Do not fear,” said *Henry*, “I feel myself strong, with you. If the planter of the black river, had refused pardon to his slave, I would have fought with him.”

“What!” cried *Jeanette*, “with that man, so large, and so wicked! To what have I exposed you! How difficult it is to do good! There is nothing easily accomplished, except evil!”

When *Henry* had gained the opposite bank, he was desirous of continuing the journey, laden as he was; and he flattered himself that he could even ascend the mountain of Three Paps, which he saw before him, at the distance of a mile and a half; but soon his strength failed him, and they both sat down to rest. *Jeanette* said to him “Brother, the day is closing, you have still strength, but I am weary, leave me here, and return alone to our cottages to comfort our mothers.”

“O no, said *Henry*, I will not leave you. If night overtakes us in the woods, I will light a fire, to fell the palm trees, you shall eat their cabbages, and I will make an *ajoupa* of its leaves, to shelter you.”

Jeanette, in the mean time, being a little recovered, gathered long leaves of the *scolopendra*, from the trunk of an old tree that grew upon the border of the river. With these she made a kind of sandals,

sandals, with which she covered her feet, which were bleeding from the pebbles, and the roughness of the way; for, eager to be useful, she had forgotten to put on her shoes, which, as before observed, were only worn by these children upon extraordinary occasions. Feeling herself refreshed by the coolness of the leaves, she broke away a piece of bamboo, and began to walk, leaning one hand upon the cane, and the other upon her brother.

They walked thus slowly through the woods, but the height of the trees, and the thickness of their foliage, intirely hid from them the mountain of the Three Paps, toward which they wished to go, and even the sun, who was near his setting. After a little time they unawaredly quitted the beaten path, which, at first, they kept, and presently found themselves in a labyrinth of trees, entwining *liannes*, and rocks, that had no issue.

Henry made *Jeanette* sit down, and ran here and there, quite beside himself, to find a way out of this thick maze; but he fatigued himself in vain. He climbed to the summit of a lofty tree, to discover, at least, the mountain of the Three Paps; but he saw nothing round him but the tops of trees, some of which were covered with fire-colour, by the last rays of the declining sun. And now, the shadows of the mountains spread over the forests in the vallies; the wind was calm, as is the case at the setting of the sun; profound silence reigned in the solitudes; no sound was to be heard, except the braying of the deer, who came to repose in these unfrequented places. Henry, hoping that some huntsman might hear him, cried out, with all his strength, "Come, come to the relief of "*Jeanette*!" But the solitary echos of the forest, replied to his voice, and repeated it, from various quarters, "*Jeanette*!" "*Jeanette*!"

Henry descended from the tree, overcome with
fatigue

fatigue and chagrin : he considered how they could pass the night in this place ; but there was no fountain, nor palm-tree, nor even a dry branch fit for lighting a fire.

He now felt, by experience, all the weaknesses of his resources, and he burst into tears. *Jeanette* said to him, “ Do not weep, brother, if you would not see me overcome with affliction. It is I who am the cause of all your troubles, and of those which our mothers suffer at this moment. Oh ! I have been very imprudent ! ” and she began to weep. She said, however, to *Henry*, “ Let us supplicate God, brother ; he will help us, and have pity upon us.”

CHAPTER

CHAPTER VII.

SCARCELY had they finished their prayer, when they heard the barking of a dog. "It is the dog of some huntsman," said *Henry*, "who comes in the night to kill the deer in their retreats." A little time after, the barking of the dog became more distinct. "It seems to me," said *Jeanette*, "like the barking of *Fidele*, our own dog. O, yes, I know his voice! have we so nearly finished our journey, and are we at the foot of our own mountain!" In reality, a moment after, *Fidele* was at their feet, barking, howling, whining, and loading them with caresses.

While they were unable to recover themselves from their surprise, they beheld *Domingo* running toward them. At the arrival of this good negro, who wept with joy at finding them, they, also began to weep, unable to utter a word. When *Domingo* came to himself:

"O my young masters," said he to them, "how miserable your mothers are! how astonished were they at not finding you when they returned from mass, whither I had accompanied them. *Mary*, who had been busy in one part of the plantation, could not tell where you were gone. I went to and fro, all round the plantation, ignorant in which part to look for you. At length, I took the clothes you sometimes wear, I made *Fidele* smell to them, and immediately he ran
" over

“ over the neighbourhood, as if the poor creature
“ understood me, continually tracing your steps.
“ He led me, always wagging his tail, to the black
“ river. There I learned from a planter that, you
“ had led a runaway negro to him, whom, for
“ your sake, he had pardoned. But what a par-
“ don ! he shewed her to me, fastened by a chain
“ round the ankle, to a log of wood, and with an
“ iron collar, of three rings round her neck.
“ Thence, Fidele, always scenting the way, led
“ me over the mountains of the black-river, on
“ the summit of which he stopped again, barking
“ with all his strength. This was at the brink of
“ some water, close to a fallen palm-tree, and
“ near the remains of a fire, which still smoked ;
“ at last, he conducted me here. We are at the
“ foot of the mountain of the Three Paps, and it
“ is still four good leagues to our cottages. Come
“ on, eat, and gather strength.” He then pre-
sented them with a cake, some fruits, and a large
calebass, or gourd-bottle, full of a liquor composed
of water, wine, lemon-juice, sugar, and nutmeg,
which their mothers had prepared to invigorate and
refresh them. *Jeanette* sighed at the recollection
of the poor runaway slave, and of the distresses of
their mothers. She repeated several times. “ O
“ how difficult it is to do good !”

While *Jeanette* and *Henry* were refreshing them-
selves, *Domingo* kindled a fire, and having searched
among the rocks for a crooked branch, of what we
call round-wood, which burns even while green,
emitting a great flame, he made a flambeau to light
them on their way, for it was already night. But
he experienced a much greater embarrassment when
they began to proceed ; *Henry* and *Jeanette* could
not walk a single step ; their feet were swelled,
and wounded all over. *Domingo* could not determine
whether he should go in search of assistance for
them

them, or pass the night with them in this place. "Where is the time," said he to them, "when I carried you both at once in my arms? but now you are grown up, and I am old." While he was in this state of perplexity, a troop of runaway negroes were discovered, about twenty paces from them. The leader of the company approaching *Henry* and *Jeanette*, said "good little whites, have no fear; we saw you pass this morning with a negress of the black-river; you were going to ask her pardon of a bad master; in return we will carry you home upon our shoulders." Saying this he made a sign, and four of the most robust blacks very soon made a litter with the branches of trees and liannes, and placing upon it *Henry* and *Jeanette*, lifted them upon their shoulders, and *Domingo* walking before them with his torch, they proceeded amid cries of joy from the whole party, who overwhelmed them with blessings. *Jeanette*, entirely exhausted, said softly to *Henry* "Oh, my friend, God never leaves a good action without recompense."

Toward the middle of the night, they arrived at the foot of their own mountain, the summits of which was illumined with several fires. Hardly had they reached the top when they heard loud voices that said: "Is it you my children?" They answered with the blacks: "Yes, it is us:" and soon they perceived their mothers, and *Mary*, that went before them with flaming torches. "Unfortunate children," said *Madame de la Tour*, "from whence do you come? in what agonies have you thrown us!" "We come," answered *Jeanette*. "from the black-river, from asking pardon for a poor negress slave, to whom I also this morning gave the family breakfast, because she was just dying of hunger; and see for, this the black runaways have brought us back again."

Madame

Madame de la Tour embraced her daughter, without power to speak ; and *Jeanette*, who felt her face wet with the tears of her mother, said to her " You repay me for all the evil I have endured ! " *Margaret*, overwhelmed with joy, clasped *Henry* in her arms, saying : " And thou too, my son, thou " hast done a good deed ! " When they arrived at their cottages with the children, they gave the black slaves plenty to eat, who fought again their woods, wishing them every blessing.

CHAPTER VIII.

EVERY day was to these families a day of happiness, and of peace. Neither envy nor ambition tormented them. They did not desire from the world the fame that is lighted up by intrigue, and that is extinguished by calumny. They were content to be to themselves witness and judge. In this island, where, as in all European colonies, they are curious only about anecdotes of scandal, their virtues and their names were alike obscure. Only when a traveller enquired on the way to Pamplémonsses, of some inhabitant of the plain, 'Who are they that dwell in those little cottages on yonder high ground?' The other answered, without knowing them farther, that, "They are good people." Thus, violets, from beneath the thorn, exhale their sweet perfumes to a distance, though themselves remain unseen.

They had banished evil-speaking from their conversation. The habit of censuring others, which assumes to itself the appearance of justice, necessarily disposes the heart to hatred, or to falsehood; for it forces upon us a dislike to mankind, which either prevents us from mingling with society, or, mingling with it, to wear appearances of benevolence, and to hide our real feelings with an artificial countenance. Thus, evil-speaking makes us quarrel with others, if we are sincere; or, with ourselves, if we deceive. But, without pretending
to

to judge individuals, they thought only of doing good to all; and though they seldom possessed the power, they had a continual willingness, which filled their hearts with a benevolence that was always ready to embrace the world. By living, then, in solitude, far from being savages, they had become more humane. If the scandalous history of society furnished no matter for their conversation, that of Nature filled it with joy and admiration. They admired with transport the power of a Providence, who, by their hands, had spread, in the midst of sterile rocks, abundance, beauty, pleasures pure, simple, and always renovating.

Henry, at the age of twelve years, more robust, and more intelligent, than Europeans at fifteen, had embellished what the negro *Domingo* only knew how to cultivate. He went with him into the neighbouring woods, to take up by the roots the young orange and lemon plants, tamarinds, whose round head is of so fine a green, and of the *attier*, whose fruit is full of a sugary cream, that has the sweet scent of the orange flower. He planted these trees, already of some height, around this inclosure. He had there sown the seeds of some trees, that, from the second year, produce flowers, or fruits: such as the *agathis*, around which depend, like the crystals of a lustre, long bunches of white flowers; the *lilach* of Persia, which elevates directly into the air its girandoles, grey as flax; the *papayer*, whose branchless trunk, shaped like a column surrounded by green melons, bears a chapitre of large leaves, that resemble those of the fig-tree.

There, too, he had planted some kernels and nuts of the badamier, of the mango, of the avocattier, of the goyavier, of the jacqs, and of the jamrose.

The greater part of these trees now yielded to their young master, both fruit and shelter. His
assiduous

assiduous hand had spread fruitfulness over the most barren places of the inclosure. Various species of aloës, the raquit bearing yellow flowers, striped with red; the thorny tapers reared themselves upon the heads of the black rocks, and seemed anxious to reach the long liannes with their blue and scarlet flowers, that overhung the precipices of the mountain.

He had disposed this shrubbery in such order that, the whole presented itself at one view. He had planted the dwarf plants in the middle of the basin; beyond these the shrubs, and then the trees, which formed a belt around it: thus the vast inclosure seemed an amphitheatre of verdure, of fruits and of flowers, containing culinary herbs, stripes of meadow ground, and fields of rice, and of corn. But in thus conforming the vegetable scene to his own plan, he had not lost sight of that of Nature. Guided by her indications, he had planted in elevated places, those of which the seeds are volatile, and upon the borders of water, those of which the seeds are made to float. Thus, each vegetable grew on its proper site, and each site received from its vegetable the natural clothing. The water which descends from the summit of these rocks, formed in part fountains, and, in another, mirror-like lakes, which reflected, amid the verdure, the blossoming trees, and the azure heavens.

Notwithstanding the great irregularity of the ground, the greater part of the plantations were as accessible to the feet as to the eye. In truth, we had given him all the advice and assistance that we could, in order to accomplish this. He had formed a path that winded round the basin, whence various branches led toward the centre. He had made use of the most rugged places, and united by the happiest efforts, facility of walking with the asperity of the soil, and wild trees with the useful. The enormous

enormous quantity of moveable stones, which are now scattered over this place, and with which almost every part of the island is equally embarrassed, were piled by him into pyramids, in various places, in the interstices of which he placed earth, and of roses, pointillades, and other shrubs, that delighted in rocky situations. In a little time, these dismal and inanimate pyramids were covered with chearful verdure, and the splendor of the finest flowers. A path led into a thicket of wild trees, in the centre of which, sheltered from the winds, grew a large and full-bearing fruit-tree. There, was a cornfield, there, an orchard. Through that vista one saw the cottages, and through this, the inaccessible summits of the mountain. There was a tufted grove of tamarques, interlaced with liannes; no object, even at noon day, was to be distinguished. From the point of that adjoining rock which projects from the mountain, you might behold every part of this inclosure, with the sea in the distance, where, sometimes, a vessel that was going to, or, returning from Europe, was to be seen. It was upon this rock that, the families assembled on an evening, and silently, enjoyed the freshness of the air, the fragrance of the flowers, and the last harmonies of light and shade.

CHAPTER IX.

AMIABLE children, thus did you pass your early days in innocence, and not altogether without acts of virtue! How many times, in that spot, did your mothers, folding you in their arms, bless Heaven for the consolation which you were preparing for their old age, and for permitting them to see you entering into life under the happiest auspices! How many times, under the shadow of these rocks, have I partaken of your rural repasts! Gourd-shells filled with milk, fresh eggs, cakes of rice on banana leaves, baskets filled with potatoes, mangoes, oranges, pomegranates, bananas, *attés*, ananas, presented at once, the most wholesome foods, the gayest colours, and the most agreeable juices.

But they had particular days of the year which were, to *Henry* and *Jeanette*, the days of the greatest of rejoicing: these were the birth-days of their mothers. *Jeanette* did not fail, upon the evening preceding each of these days, to prepare and bake wheaten cakes, which she sent to the poor European families, natives of this island, who had never tasted such bread. These cakes were the only presents which *Jeanette* had in her power to make, out of the wealth of their plantation; but she added an amiableness, in the manner of giving, that made the present of much value. First, *Henry* was engaged to carry them himself to these families, and

to engage them, at the same time, to come on the morrow, and pass the day with *Madame de la Tour* and *Margaret*. Next day, there arrived a mother with two or three miserable daughters, yellow, meagre, and so timid that, they dared not to lift up their eyes. *Jeanette* soon made them comfortable: she served them with refreshments, the excellence of which she increased by relating some circumstance that, according to her, increased its relish. This liquor had been prepared by *Margaret*; that other by her mother; her brother had gathered this fruit himself, from the top of a tree. She requested *Henry* to dance with them. She never left them till she saw them satisfied and happy. She wished them to enjoy the joy of the family. "One can be happy," she said, "only by employing ones-self to make others so." When they were about to return home, she persuaded them to take whatever she had seen them look at with particular pleasure; covering the idea of accepting her presents under the pretext of their novelty, or of their singularity. If she observed their clothes to be exceedingly worn, she selected, with the consent of her mother, some of her own, and charged *Henry* to go and lay them, secretly, at the door of their cottage. Thus she did good, after the manner of the Deity, concealing the giver, and exhibiting the gift.

You, Europeans, whose minds are filled, even from your cradles, with so many prejudices inimical to happiness, you can scarcely imagine that simple Nature can bestow so much refinement, or so many pleasures. Your minds, circumscribed by the little sphere of human knowledge, soon arrive at the utmost limit of artificial enjoyments; but Nature and the heart are inexhaustible. *Henry* and *Jeanette* had no time-pieces, nor no almanacks, nor books of chronology, nor of history, nor of
 I philosophy,

philosophy. The periods of their lives were marked by those of Nature. They knew the hours of the day by the shadows of the trees ; the seasons, by the times at which they produced their flowers, or their fruits ; and the years by the number of their harvests. These delightful images filled their conversations with the greatest charms. " It is " dinner-time," said *Jeanette* to the family ; " the " shadows of the bananas are at their feet ; " or else, " night approaches : the tamarinds close their " leaves *." When shall we see you," said some of their friendly neighbours : " At the time of the " sugar-canes, replied *Jeanette*. When she was asked concerning her own age, and that of *Henry*, " My brother," she would say, " is of the same " age as the great cocoa tree at the fountain, and I " of that of the smaller one. The mangoes have " given us fruit twelve times, and the oranges have " blossomed twenty-four times, since I was born." Their lives seemed attached to the trees, like those of the Fauns and the Dryads.—They knew no other historical epochs than the lives of their mothers, no other chronology than their orchards, nor other philosophy than to do good to all the world, and to resign themselves to the will of God.

* This may be observed in England, in various instances, particularly in the *Sena*, and, I believe, the *Laburnum*, whose leaves nearly resemble those of the *Tamarind*.

CHAPTER X.

STRANGER, said the venerable man, I have dwelt upon the happiness and peaceful lives of these families, and you will not wonder at the pertinacity with which I have clung to those pleasing recollections, nor at the reluctance with which I forego them, when I have related the sequel of the tale. The first interruption of our happiness was, the arrival of a vessel from France, which brought a letter from the aunt of Madame *de la Tour*. This lady, who had formerly been applied to for succour, and who had returned only illiberal reflections upon her niece, had just recovered from a fit of illness which left her in a very languid state.

She requested that her niece would return to France; or, if her own health did not permit her to undertake so long a voyage, she enjoined her to send *Jeanette*, on whom she intended to bestow a good education, a place at court, and a bequest of all her fortune. She added that, the return of her kindness depended intirely upon punctual obedience of these orders.

The family had no sooner read this letter than it was overcome with consternation. *Domingo* and *Mary* burst into tears; *Henry* became motionless through astonishment; *Jeanette* fixed her eyes upon her mother, and dared not utter a word. Madame *de la Tour* at length restored chearfulness to all, by

declaring she did not mean to comply with the demands of her relation.

Next morning, at sun-rise, after they had offered their morning prayer, together, according to their custom, *Domingo* informed them that, a gentleman, on horseback, followed by two slaves, was approaching the plantation. It was *M. de la Bourdonaye*, the governor of the island. He entered the cottage, where all the family were at breakfast. *Jeanette* was serving coffee and boiled rice, according to the custom of the country. She had brought roasted potatoes, and fresh bananas. All their vessels were halves of gourds, and their breakfast-cloth was made of plantane leaves. At first, the governor betrayed some astonishment at the poverty of the family; but, afterward, he addressed himself to *Madame de la Tour*, saying that, public concerns sometimes prevented him from paying attention to individuals, but she had many claims to his regard. "You have, madam," added he, "an aunt at Paris, a lady of quality, and very rich, who designs to bestow her fortune upon you, but, at the same time, she expects that you will leave this island, and go to her in France."

Madame de la Tour replied that, her unsettled health would not permit her to undertake so long a voyage.

"At least," replied *M. de la Bourdonaye*, "you cannot, without injustice, deprive your young and amiable daughter of so rich an inheritance. I will not conceal from you that, your aunt has employed authority, in order to force your daughter to attend her pleasure. The minister has written to me upon this subject, ordering me to use my power, if necessary; but, exercising that only to render the inhabitants of this colony happy, I wait your willingness to make a sacrifice of only a few years, upon which depends the establishment of
" your

“ your daughter, and the welfare of your future
“ life.

Saying these words, he laid upon the table a large bag of money, which one of the blacks had carried: “ See here,” said he, “ what your aunt has sent
“ to provide for the voyage of your daughter.”

M. de la Bourdonaye, invited by *Madame de la Tour*, seated himself beside her at table. He breakfasted, after the manner of the country, upon coffee, mixed with boiled rice. He was charmed with the order and neatness of the little cottage, the unanimity of the two amiable families, and even with the attachment of their old domestics. “ Here is no furniture here,” said he, “ but what the woods supply, yet I see serene
“ countenances, and hearts of gold.” *Henry*, delighted by the affability of the governor, said to him: “ I wish to be your friend, for you are an
“ honest man!” *M. de la Bourdonaye* received this mark of insular cordiality with pleasure. He gave his hand to *Henry*, and assured him that he might depend upon his friendship.

After breakfast, he spoke with *Madame de la Tour* in private, and informed her that, an opportunity of sending her daughter to France, a vessel being ready to sail, presented itself; that he would recommend her to the care of a lady, a passenger, that was related to himself, that it would be exceedingly wrong to abandon an immense fortune for the sake of the mere gratification she might receive from her daughter’s company, during a few years. “ Your aunt,” added he, on departing, “ cannot hold out longer than two years, as her
“ relations have informed me. Consider the
“ matter well. Fortune does not offer herself
“ every day. Revolve the matter in your mind.
“ Every person of sound sense will support my
“ opinion.” *Madame de la Tour* replied that,

“ desiring henceforth no other happiness than that
“ of her daughter, she should leave her departure
“ for France intirely to her own choice.”

In short, *Madame de la Tour* acquiesced, and *Jeanette* submitted to the sentence of their wealthy relation. They endeavoured to prepare their minds for the separation. Meanwhile, a report was speedily circulated through the island that, Fortune had visited these rocks; and, presently, crowds of merchants thought it worth while to climb them. These displayed, within the poor cottages the richest stuffs of India; the superb dimities of Goudelour; the handkerchiefs of Poulicat, and of Mazulipatam; the muslins of Decca, plain, striped, and embroidered, transparent as the day; the bastas of Surat, of a singularly fine white; chintzes of all colours, and of the rarest patterns, of a black ground, and green sprigs. They unrolled the magnificent silks of China; pinked lampas; damasks of a satiny-white; others of a grass-green, and others of a dazzling red; rose-coloured taffetas; whole pieces of satin; Pekins, soft as wool; white and yellow Nankins, and even the cloths of Madagascar.

Madame de la Tour permitted her daughter to buy whatever pleased her; she attended, herself, only to the quality and price of the merchandise, fearful that the traders might impose upon *Jeanette*. *Jeanette* chose every thing that she thought would be agreeable to her mother, to *Margaret*, and to *Henry*. “ This,” said she, “ will be useful for
“ furniture, that for *Mary* and *Domingo*.” In short, the bag of money was expended before she had thought of her own wants. She was obliged to receive her own share out of the presents which she had distributed among the family.

Henry, pierced with sorrow at the sight of these gifts of Fortune, that, in his apprehension, presaged the departure of *Jeanette* (for the determination had
been,

been, out of tenderness, concealed from him) came to my house, some days after this, and said to me, with a melancholy air: "*Jeanette* is going to leave us: preparations are already made for her voyage. Come to us, I beg of you. Employ your influence on the minds of her mother, and of mine, to retain her here." I yielded to the requests of *Henry*, though I was very sure that my representations would have no effect.

At supper time, we all sat down to table, where the guests, agitated by different passions, ate little, and did not utter a word. *Jeanette* retired first, and came and seated herself where we now are. *Henry* soon followed, and placed himself beside her. Both the one and the other, during a long time, preserved a profound silence. It was one of those delightful nights, so common between the tropics, of which the most able pencil can give no idea. The moon appeared in the middle of the firmament, surrounded by a curtain of clouds, which were gradually dissipated by her rays. Her light spread itself insensibly over the mountains of the island, and their peaks, that glittered with a silver green. The winds held their breaths. We heard from the woods, from the depths of the vallies, from the heights of the rocks, chirpings, and soft warblings of birds, that were delighted by the brightness of the night, and the tranquillity of the air. All, even the insects, were humming amid the grass; the stars shone in the heavens, and the bosom of the sea reflected their trembling images. *Jeanette*, in melancholy silence, gazed with vacant eyes at the vast dark horizon, marked, along the shore of the island, by the red fires of the fishermen. She perceived a light, and a shadow. These proceeded from the lanthorn and body of the vessel in which she was to embark for Europe, and which, intirely ready to sail, waited only for the end of the calm.

This sight overcame her, and she turned away her head, to hide her tears from *Henry*

Madame de la Tour, Margaret, and myself, were seated at the distance of a few paces from them, under the bananas ; and the perfect stillness of the night enabled us to hear their conversation distinctly, which I have not forgotten.

CHAPTER XI.

"*JEANETTE*," said *Henry*, "you are to go, they tell me, in three days. Are you not afraid to expose yourself to the dangers of the sea — of the sea, at which you used to be so terrified?"

"Alas!" said *Jeanette*, "to please myself I would stay here all my life." Sobs interrupted her voice, and would not suffer her to proceed.

They had not conversed long before they were wholly overcome by affliction: their words and their apparent distress disarmed *Madame de la Tour* of every prudential argument with which she had fortified her heart: "I cannot bear it longer," cried she, "my soul is torn in pieces—This unfortunate voyage shall not take place."

She asked me to take *Henry* home with me for that night. I accordingly said to him, "my friend, *Jeanette*, shall remain with us: to-morrow we will speak to the governor: leave the family to repose, and come home with me; it is late—it is midnight."

He suffered me to lead him, without uttering a word of reply; and after a night of extreme inquietude, he arose and returned towards the plantation.

But why, said the old man, should I continue this melancholy story? There is only one side of human life which is pleasant to behold. Like the

globe on which we revolve, our rapid course is merely that of a day; and one part of this day cannot receive the chearful beams of light, unless the other is given up to darknefs.

“ Father, said I, “ I conjure you to finish the
“ narrative which you begun in a manner so pathe-
“ tic. Images of happinefs please us; but those
“ of misfortune bestow instruction. What be-
“ came, let me ask, of the unfortunate *Henry*?”

CHAPTER

CHAPTER XII.

THE first object which *Henry* beheld on returning to the plantation was, the negress, *Mary*, who, standing upon a rock, looked toward the open sea. He cried out from the distance at which he perceived her: "Where is *Jeanette*?"

Mary turned her head toward her young master, and burst into tears. *Henry*, almost ignorant of his own actions, nay, in temporary madness, turned about, and ran to the port. There he learned that, *Jeanette* had embarked at day-break, that the vessel had weighed anchor immediately, and that, it was now out of sight. He returned to the plantation, and walked up and down, without speaking to any person.

Though this inclosure of rocks appears, behind us, to be almost perpendicular, those green flats, which divide their heights, are so many stages by which you gain, with the assistance of some intricate paths, the foot of that inclining, and inaccessible cone of rocks, which are called the *Thumb*. At the bottom of that rock is an esplanade that is covered with large trees: but it is so lofty, and so steep, that, the forest appears to stand in the air, surrounded by fearful precipices. The clouds, which the summit of the *Thumb* continually attracts around it, supply several springs that fall to so great a depth in the bottom of a valley which is on the other side of the mountain that, at the height of which

I am speaking, the noise of their descent is not to be heard. From that situation, the greater part of the island is perceptible at one view, with its mountains surmounted by their peaks; among others, that of Piterboth, and those of the Three Paps; and with its vallies filled with forests: beyond these, the open sea, presents itself, and the Island of Bourbon, which is forty leagues westward.

It was from that elevation *Henry* perceived the vessel that carried away *Jeanette*. He saw it at the distance of more than ten leagues, as a black spot, amid the vast, and, seeming, boundless ocean. He remained there, during a great part of the day, absorbed in contemplation of this point. It had already disappeared; but he believed that he saw it again; and when it was lost in the mist of the horizon, he sat down in that wild place, which is constantly assailed by the winds, which agitate, incessantly, the tops of the palmists, and of the tata-maques. Their loud and hollow murmurs resemble the distant tones of an organ, and inspire a profound melancholy.

It was there that I found *Henry*: his head leaning against a rock, and his eyes bent toward the ground. I had been searching for him ever since sun-rise. I had considerable difficulty in persuading him to descend, and to behold his family again. I led him, however, to the cottages, and his first action upon seeing *Madame de la Tour* consisted of bitter complaints that she had deceived him.

Madame de la Tour told him that, the wind having sprung up at about three o'clock in the morning, the vessel being in full readiness, the governor, followed by a part of his *etat-major* or principal officers, came, in a palanquin, to take away *Jeanette*; and that, notwithstanding her expostulations, and the tears of *Margaret*, and herself, which were opposed by a general cry that, the thing was highly beneficial

ficial to all; they had borne away *Jeanette*, whose distress almost deprived her of animation:—

“ If I had but bade her adieu,” exclaimed *Henry*,
“ I could now be calm. I would have said, *Jeanette*,
“ if during all the time that we have lived together,
“ I have ever uttered a word that has offended you,
“ now, before you go away for ever—tell me that
“ you forgive me. I would have said to her: as I
“ am never to see you again, adieu, my dear *Jeanette*,
“ adieu! Far from me, may you live contented and
“ happy!”

He left the cottages, and wandered about the plantation. He visited every place that *Jeanette* had loved. He said to the goats, and to their little kids, that followed him, bleating: “ what do you ask of me? you will never see with me again, she from whose hands you used to eat.” He went to the place which he had called *JEANETTE’S REPOSE*: and, to the birds that fluttered round him, he cried—“ poor birds! never again will you flutter before her who was your nursing benefactor!” Seeing *Fidele*, who was ranging here and there, scenting the way, he sighed and said to him: “ Oh! You will never find her!” At last, he seated himself upon the rock where he had talked with her on the preceding evening, looking at the sea, at the sight of whose heart-breaking infinity, in which the vessel was lost to him, he gave himself up to tears.

In the mean time, we followed every step that he took, fearing some fatal catastrophe to the agitation of his mind. His mother, and *Madame de la Tour*, begged him, in the most tender language, not to increase their affliction by his despair. At length *Madame de la Tour* succeeded in calming him, by using appellations that were well calculated to revive his hopes: She called him, her dear son, her son-in-law, him on whom she intended to bestow her daughter. She persuaded him to re-enter
the

the cottages, and to take a little nourishment. He sat down to table with us, near the place wherein the companion of his infancy used to sit; and, as if she had still occupied it, he addressed himself to her, and presented foods as he knew to be most agreeable to her; but presently perceiving his error, he silently shed tears. For many days he employed himself in collecting what she, in particular, had used: the last nosegay which she had worn, a cup of cocoa-nut out of which she had been accustomed to drink: and, as if these relics of his beloved had been the most precious things in the world, he kissed them, and put them in his bosom. Ambergris does not yield so sweet a perfume as the most trifling things that have been touched by a person that is dear to us. At length, seeing that his sorrow increased those of his mother, and of *Madame de la Tour*; and that, the necessities of the family required continual labor, he addressed himself, with the aid of *Domingo*, to repair and cultivate the garden.

Henry, hitherto as redolent as a creole of every thing that passed in the world, soon after this, begged me to teach him to read and to write, in order that he might maintain a correspondence with *Jeanette*. Afterward, he wished to learn geography, that he might form an idea of the place to which she was gone; and history, that he might know the manners of the people among whom she lived.

Among books, none so much delighted him as *Telemachus*, by the pictures that it delineates of a country life, and of the passions that are natural to the human heart. He fancied that, in *Jeanette*, was the dignity and wisdom of *Antiope*, united with the misfortunes and the tenderness of *Eucharis*. Still connecting all that he saw or heard with the one thought of *Jeanette*, he was shocked at our fashionable novels; and when he was told that, they were faithful pictures of European society, he feared, not without

without some appearance of reason, that, *Jeanette*, corrupted by the general disorder, might no longer recollect the friend of her youth.

Nothing is more dangerous to the existence of friendship, than total silence in absence; and, in truth, nearly two years had elapsed, and no intelligence had arrived from *Jeanette*. The mind takes alarm at the apparent neglect; and the most candid will sometimes entertain suspicions respecting the cause, that are wholly unworthy both of the one person, and the other. Friendship results from confidence, and confidence from intimacy. If these are suffered to decline, if new pursuits, and new scenes, are entered upon during this silence; if the chain of intimacy is broken, busy meddling anxiety takes advantage of the chasm, to fill it up with unfavourable apprehensions; and the heart cannot without difficulty receive, as the same individual, the object that has been long and wholly estranged. Friendship arises, perhaps intirely, from our adventitious knowledge, to certain degrees of minuteness, of him whom we call our friend: of his taste, his feelings, his opinions, his secrets, his weaknesses; and if this knowledge be once obliterated, or remembered but indistinctly, he sinks almost into the back-ground, the common level of mankind, whom we regard with too much indifference, and often with contempt.—Nay, I am inclined to think that, in some cases, the consequences are worse; that our previous intimacy is occasionally, turned to his peculiar disadvantage. We should be careful that no appearance of neglect, or disregard, present any opportunity to the mind of our friend, wherein it may form disagreeable conjectures. We should never think of making experiments upon his feelings: they are too tender, and too subtil: one unfortunate touch may destroy, for ever, the harmony of the whole. We risk the dissolution of that spell
by

by means of which we hold a place in his affections, and seem to him to form an indispensable part of his own entity. If the delusion once vanishes, he may discover that he can exist alone.

But it is not his affection only that may decay : of him whom we have once persuaded ourselves to treat with neglect, or suffered to be the sport of our caprice, we shall soon learn to think in an ordinary way. And shall we, for any trifling cause, for the slumbers of indolence, or the petty triumphs of vanity, shall we cast away a blessing to replace which the whole material world may be ransacked in vain : I mean that model of imagined excellence, to which our eyes, fatigued by life's many-coloured prospect, may revert at pleasure, and behold

“ whatever fair high fancy forms,
“ or lavish heart can wish ? ”

We should not, therefore, permit long intervals of silence to divide us from him whose friendship we desire to retain, or the remembrance of whose virtues we wish to cherish. The silence of death, indeed, may not be fatal to the recollections of attachment. But death is much more favourable than life to the reputation of merit. Every people, of every age, and of every country, appear, in reality, and however inconsistently with the general scope of their opinions, to have considered death as a misfortune : and misfortune seems to exist for the very purpose of undermining, continually, the resentments, and the prejudices of mankind ; and of obliterating the remembrance of their causes. The dead are, besides, remembered only by a general character ; and there are few to whose fame this will not be advantageous. There is more virtue as well as happiness, in the world, by ten thousand times, than there are misfortune or vice ; though the contrary appears upon

upon superficial survey. Farther, the magnitude of the event of mortality absorbs all trifling distinctions: difference of opinion, of ordinary habits—nay, the colour of a man's skin, or the contour of his garment, excited disgusts, while he is living, that frequently produce serious consequences: but, after his death, if they are remembered, it is without ridicule; or, if a smile faintly discover itself, it is not the smile of contempt; and it is followed by a sigh, that will not suffer the heart to lose with its sensibility. The very errors of the dead, having ceased to injure, cease to deserve, or to create resentment. If, then, even the calumniating, censorious, harsh-judging world, lean upon the sepulchre with a heart so liberal, and so willing to admire—with what feelings will those approach, to whom in life the man was dear? What rite will these celebrate within the dedicated temple of their bosoms? and where, short of canonisation, will it stop? Let us return to our story: the dead and the mourned are angels, but the living and their friends are men: perpetually deceived, and, therefore, perpetually suspicious; ignorant, and, therefore misjudging; always prejudiced in favour of the name of truth, and commonly mistaken as to its substance: consequently, credulous, jealous, fickle, and opinionated.

To obtain, and much more to preserve, the affection of such a creature, then, as man, it is plain that, the most boundless confidence, and the most uninterrupted intimacy is needful: for, in concealment he imagines fraud; he has no durable admiration for that which he does not understand; and he understands that only which is manifest and obvious to his faculties.

To the sensations that I have described, the heart of *Henry* was sometimes a prey. He rejected with disdain the slightest idea that was derogatory of *Jeanette*: such, nevertheless, would sometimes obtrude

obtrude themselves. At length, when two anxious years had passed, a letter arrived, and he found with joy that, *Jeanette* had not, amid the luxuries with which her aunt surrounded her, forgotten the cottages, nor himself. He was ashamed of his suspicions. Her seeming neglect, to which no cause had appeared to be adequate, was found to have proceeded from circumstances over which she had no control ; and her conduct, like that of the generality of mankind, needed explanation, rather than forgiveness.

On the subject of her silence, she said :—

“ Very dear, and much beloved Mother,

“ I have already written several letters to you, in my own hand ; but as I have never had any reply, I have reason to fear that, they have not reached you. I have better hopes of this, on account of the precautions which I have now taken to send you intelligence of myself, and to receive your’s in return.

“ I endeavoured, at first, to send you a letter written by the hand of a stranger, on account of my own incapacity ; but, not having found, since my arrival here, a single person in whom I could place confidence, I applied myself to learn to read and to write. God enabled me to accomplish both in a very little time. I intrusted the ladies who attend me, with the care of sending the first letters ; but I have reason to believe that, those were delivered to my grand-aunt. You receive the present through the favour of one of my friends, who is a fellow-boarder ; and under her address, which is subjoined, I beg you to send your answer.”

“ I inclose you, in this packet,” said she, in another part of her excellent letter, “ the kernels and nuts which I have collected from among fruits

“ that

" that are brought to our tables; with the seeds of
 " all sorts of trees that I have gathered, during
 " my hours of recreation, in the grounds of the
 " convent wherein my grand-aunt has placed me
 " for education. I have also added the seeds of
 " the violet, the daisy, the poppy, the corn-
 " bottle, and the scabious, which I have found
 " in the fields. * There are much finer flowers in
 " the meadows of this country than there are in
 " ours; but no one cares for them. † I am sure
 " that, you, and my mama *Margaret*, will be better
 " pleased with this bag of seeds, than with the bag
 " of money which preceded our separation, and
 " my tears. It will give me great pleasure if you
 " one day have the satisfaction of seeing apple trees
 " grow among our bananas, and peach trees ming-
 " ling their foliage with our cocoas. You will be-
 " lieve yourself in Normandy, ‡ the country that
 " you love so well."

In conclusion, she spoke of *Mary and Domingo*,

* The same attention to seeds, &c. is recorded of *Lee Boo*, the son of *Abba Thulé*, of the Pellew, or Palos, islands. Are we to attribute these regards to a peculiar greatness or sensibility of mind, to any particular flow of patriotism, or to a general instinct that attaches every one, involuntarily, to the treasures of Nature?

† The flowers of the countries, without the tropics, are much more brilliant than are the flowers between the tropics, where the birds are so beautiful. When *Jeanette* says, 'our country,' she means the *Isle of France*, or *Mauritius*, which is about three degrees within the tropic of capricorn. It may be found in the maps, together with the island of *Bourbon*, in the Indian sea, on the eastern side of Madagascar, which is also east of the coast of Africa.

‡ Part of France, opposite to Sussex, Hampshire, and Dorsetshire.

" who

“ who had taken so much care of her infancy,” and to whom she sent little presents : “ caress Fidele, for me,” she added, “ who found me in the woods.”

Henry was thoroughly astonished that, *Jeanette* had not said a word respecting himself : he had not the slightest idea of a lady's *postscript*. In this, she particularly recommended to *Henry* two species of seeds, those of the violet, and of the scabious. She gave him some information respecting the characters of these plants, and the places most proper for their culture. “ The violet,” she told him, “ produces a little flower of a deep purple colour, and loves to conceal itself under the thickets ; but its charming perfume soon betrays its retreat.” She enjoined him to sow it by the side of the fountain, at the foot of her cocoa tree. “ The scabious,” added she, “ is a pretty flower of a faint blue, * and the bottom is black, spotted with white. It is fancifully said to be in mourning ; and, for this reason, is sometimes called the widow's flower. It delights in rugged places, that are exposed to the wind.” She begged him to sow it upon the rock whereon they conversed by night, for the last time, and to call that rock, for her sake, *ROCHER DES ADIEUX*,

She had inclosed these seeds within a little purse that was embroidered with extreme simplicity, but which appeared to *Henry* to be beyond all price when he saw the initials *H.* and *J.* intertwined, and formed of hair, which, by its beauty, he knew to be that of *Jeanette*.

Henry wrote a very long letter in reply, in which he assured her that, he would render the garden worthy of her, and mingle there the plants of Europe with those of Africa, in the same manner as herself had intertwined their names in her embroidery.

dery. He sent to her some of the fruits of the cocoa trees of the fountain, which had now arrived at perfect maturity. It was unaccompanied, he added, by any other seed of the island, in order that, the desire of seeing those productions again might induce her immediate return. He intreated her to restore herself, without delay, to the ardent wishes of the family, and to his own in particular, since he could taste no joy separated so far from her.

Henry sowed the European seeds with the greatest care, and more especially those of the violet and scabious, the flowers of which seemed to have some analogy with the character and situation of *Jeanette*, who had so particularly recommended them; but, either they had been spoiled in their passage, or, rather, the climate of that of Africa was not favorable to their growth, for very few appeared above ground, and of these none attained perfection.

CHAPTER XIII.

AGAIN, a long interval of silence gave birth to suspicions in the mind of *Henry*, that destroyed his own peace, and dishonoured the memory of *Jeanette*. A year and an half had passed, during which period of time many vessels from Europe had arrived, but not one of them brought news of *Jeanette*.

At length, at day-break, on the 24th of December, 1752, *Henry* had no sooner risen than he beheld a white flag on Mount Discovery. This flag was the signal that a vessel was descried at sea. *Henry* ran toward the city, to learn whether it brought tidings of *Jeanette*. He remained there till the return of the pilot of the port, who was gone, according to custom, to reconnoitre the vessel. This man did not return till the evening. He reported to the governor that, the vessel for which the signal had been made was the *Saint-Gerand*, of seven hundred tons burthen, commanded by a captain whose name was *M. Aubin*; that she was at the distance of four leagues; and that she could not anchor in Port-Louis before the afternoon of the next day, even if the wind was fair. There was no wind whatever at that time. The pilot delivered to the governor the letters which the vessel had brought from France. There was one for *Madame de la Tour*, in the hand-writing of *Jeanette*. *Henry* seized it immediately, kissed it with transport, put
it

it in his bosom, and ran to the plantation. At a distance, he beheld the family, who were waiting his return upon the *ROCHER DES ADIEUX*: he held up the letter without having power to speak, and immediately every body gathered round *Madame de la Tour*, to hear it read. *Jeanette* told her mother that, she had suffered much ill treatment from her grand-aunt, who had wished to force her into a marriage that was contrary to her inclination; that, after this, she had turned her out of doors, and, at length, had sent her back at a time of the year that prevented her from arriving at the Isle of France before the hurricane-season; that she had tried in vain to soften her, by representing to her what she owed to *Madame de la Tour*, her mother, and to the connections of early life; that her aunt, in return, had treated her as a foolish girl, whose head had been turned by fine stories of honour and principles, and other romantic * notions; that she was on board the *Saint Gerand*; and that, now, her only wish was to see again, and embrace her dear family; that she would have gratified this ardent desire that very day, had the captain permitted her to come on shore by the pilot's shallop, but that, he had kindly opposed this, because of the ship's distance from the shore, and of a heavy sea around them, notwithstanding the calmness of the air.

This letter was scarcely read, when all the family, in a transport of joy, cried out: "*Jeanette* is arrived." *Madame de la Tour* said to *Henry*: "My son, go, and inform our neighbour that "*Jeanette* is arrived," Immediately *Domingo* lighted a flambeau of round wood, and accompanied *Henry* toward my habitation.

It might be about ten o'clock in the evening: I was about to extinguish my lamp, and to lay

* Virtue the sons of interest call, romance.

THOMSON.
down

down to rest, when I perceived, through the palisadoes of my cottage, a light in the woods. Soon after, I heard the voice of *Henry* who was calling to me. I rose up, and I was scarcely dressed, when *Henry*, half wild, and breathless, rushed upon me, and said: "Come along, come along, "*Jeanette* is arrived! Let us go to the port, the ship will anchor by day-break."—I immediately complied

As we passed through the woods of the long mountains, and were already in the road that leads from Pamplemousses to Port-Louis, I heard some one walking behind us. It was a black, hurrying along very swiftly. As soon as he came up with us, I asked him whence he came, and whither he was going in so great haste? He answered me: "I come from the quarter of the island called, "Gold-Dust; I am sent to apprise the governor "that, a vessel from France has anchored under "Amber Island; and that she fires guns as signals "of distress, for the sea is very high." The man having thus spoken, continued his way without loss of time.

I then said to *Henry*: "Let us go to the quarter of "Gold-Dust, to meet *Jeanette*; it is but three "leagues from this place." We accordingly pursued our course toward the north of the island. The heat was suffocating. The moon had risen; around her were seen three large black circles. The heavens wore a frightful gloom. The frequent flashes of lightning discovered to us long stripes of thick, dark, low-hanging clouds, that heaped upon one another toward the middle of the island, and came from the sea with great swiftness, though not the least wind was to be felt on shore. On our way, we believed that we heard the rolling of thunder: but having attentively listened, we found it to be the firing of cannon, reverberated by the
echos

echos. This noise afar off, joined to the stormy aspect of the sky, made me tremble. I could not doubt but that it was the signal of distress from some ship on the point of being lost. Half an hour after we heard no more firing, and this silence appeared to me even more alarming than the dismal noise which had preceeded it.

We advanced hastily, without speaking a word, and without daring to impart our fears to each other. Near midnight we arrived, heated by our walk and by the agitation of our minds, on the sea-shore, at the quarter of Gold-Dust. The waves broke themselves against it with tremendous noise. They covered the rocks and the shores with foam of a dazzling whiteness, and glittering like fire. Notwithstanding the darkness, we discovered by these phosphoric lights, the canoes of the fishermen, which they had drawn high up on the sand.

At some distance from these, we saw, at the entrance of the woods, a fire, round which several inhabitants were assembled. We went thither, to rest ourselves till day break. While we were seated round this fire, one of the planters related to us that, in the preceding afternoon, he had seen a vessel at sea brought toward the island by the currents; that night had come on, and hid it from his sight; that two hours after sun-set, he had heard the firing of cannon, as calling for assistance; but the sea was so rough that, no one had been able to send out any boat to its relief; that soon after, he thought that he could perceive the lanthorns lighted, and that, if he were right in this, he feared that vessel having come so near the shore, had passed between the main land and the Isle of Amber, mistaking the latter for Mire-Point; near to which the vessels arriving at Port-Louis usually pass; and that, if this were true, which he could not positively assert, the vessel must be in the greatest danger.

Henry and myself preserved uninterrupted silence. He remained there till day-break ; but even that produced too little light to let us distinguish any object at sea, which, besides, was covered with a fog ; we could just perceive a dark, cloudy appearance, that, they told us, was the Isle of Amber, situate at about a quarter of a league from the coast. The twilight only discovered to us the point of the shore on which we were, and some peaks of the interior mountains of the island, which sometimes shewed themselves from among the clouds by which they were surrounded.

Toward seven o'clock in the morning, we heard from the woods the sound of drums : it was the governor, *M. de la Bourdonaye*, who arrived on horseback, followed by a detachment of soldiers, armed with musquets, and a great number of planters and slaves.

He drew up the soldiers upon the beach, and ordered them to fire a volley. Scarcely had they obeyed, when we saw a light at sea, which was presently followed by the report of a cannon. We concluded that the vessel could not be far distant from us, and we all ran toward the place whence we had heard the signal. We then perceived, through the mist, the hull and sail-yards of a large vessel. We were so near that, notwithstanding the noise of the waves, we heard the whistle of the boatswain, and the voices of the sailors who three times cried out, *VIVE LE ROI* : for this is the cry of Frenchmen in moments of extreme danger, as well as in those of joy : as if, in danger, they called their prince to their assistance ; or, as if they meant to say that, they were ready to die for him.

From the moment in which the *Saint Gerand*, saw that she was within reach of help, she did not cease to fire cannon every three minutes. *M. de la Bourdonaye* caused larger fires to be kindled at little distances

distances along the coasts ; and sent to all the neighbouring inhabitants for provisions, planks, cables, and empty casks. Presently, crowds of people arrived, accompanied by their slaves who were loaded with provisions and cordage, from the *Poudre-d'or*, gold-dust, the *Flacque*, and the rampart-river. One of the oldest of these planters approached the governor, and said : " Sir, loud noises have been heard all night in the mountains : in the woods, the leaves tremble, though there is not a breath of wind : the sea-birds are coming to land for shelter : certainly all these sounds announce an hurricane."

" Very well, my friend," replied the governor, " we are prepared ; and, surely, the vessel is so like a wife." In truth, every thing presaged the approach of a tempest. The clouds that were seen in the zenith, or middle of the heavens, were of a frightful black at their centre, and copper-coloured at their edges. The air was filled with the cries of the pailencus, the frigats, the water-cutter, and many other birds, which, notwithstanding the obscurity of the atmosphere, came from all points of the horizon, to seek shelter in the island.

CHAPTER XIV.

TOWARD nine o'clock in the morning, we heard from the sea-side dreadful noises, as if torrents of water, mixed with thunder were rolling from the tops of high mountains. All of us exclaimed—"There is the hurricane!" and, in that moment, a frightful whirlwind carried off the fog which had covered the Isle of Amber and its channel. The Saint-Gerand then appeared to view, with her deck crowded with people, her yards and round-tops lowered, her flag hoisted, four cables on her fore-castle, and one to secure her fast-a-stern. She had cast anchor between the Isle of Amber and the main land, within the ridgy girdle, which encloses the Isle of France, which she had weathered through a strait, that no vessel had passed before. She presented her bows to the billows which came from the high sea; and at every surge that made its way into the channel, her prow was elevated in such a manner that, the keel was seen in the air; but in this moment, her stern plunging down, disappeared from sight up to its carved-work, as if she had been quite swallowed up; in this position, with the winds and waves driving her on shore, it was alike impossible to her to return through the track by which she had come, or, by cutting her cables, to run aground upon the shore, from which she was divided by a deep bottom, sown with shelving rocks.

Every

Every wave which broke upon the coast, advanced roaring on, even to the bottom of the bay, and threw the pebbles more than fifty feet upon the shore; then retiring it discovered a great part of the bed of the waters, the stones of which were dashed about, with a hoarse and horrible noise. The sea, swelled by the wind, increased every instant, and all the channel, comprised between this Island and the Isle of Amber, was only a vast sheet of white foam, indented with deep, and dark waves. This foam gathered itself at the bottom of the creeks, more than six feet in height, and the winds which played upon its surface, carried it over the cliffs of the shore more than half a league into the Island. To have seen their innumerable white fleaks that were driven nearly parallel with the foot of the mountains, you would have said it was snow coming out of the sea. The horizon gave every sign of a long tempest: the sea and sky appeared confounded together: There arose from the horizon, without intermission, clouds of a frightful aspect, which traversed the zenith with the rapidity of birds; while others seemed immoveable like ponderous rocks. No particle of azure was to be perceived in the firmament; a livid copper-coloured light, was all that illumined the objects of the earth, of the sea, and of the heavens.

In the heaving of the vessel, it happened as we had feared. The cables on her bows broke, and as she was then only secured by a single hawser, she was thrown upon the rocks, half the length of her cable from the shore. From every one there was a mournful cry. *Henry* was going to leap into the sea, when I seized him by the arm—"My son," said I, "would you perish?" "Let me go to aid her," cried he, "or let me die!"

As despair had overcome his reason, to prevent his destruction, *Domingo* and myself tied round him a long cord, one of the ends of which we held.

Henry then advanced toward the *Saint-Gerand*, now swimming, now walking on the shallows. Sometimes he had hopes of boarding her; for the sea in these fluctuations, left the vessel nearly dry, so that you could almost walk round her; but soon returning with renewed fury, it covered her with enormous vaults of water, that carried away from her the whole fore part of her bottom, and cast back the unfortunate *Henry* a great way upon the shore; his legs bleeding, his chest bruised, and half drowned. Hardly had this young man regained the use of his senses, than he arose again, and returned with new ardor toward the vessel, which the sea in the mean time had torn to pieces with terrible attacks. Every person on board having now despaired, they precipitated themselves in numbers, into the sea, on masts, on planks, on hen-coops, on tables and on casks. It was then that we saw an object worthy of eternal regret: a young lady appeared upon the stern-gallery of the *Saint-Gerand*, extending her arms toward him who was making so many efforts to reach her. It was *Jeanette*. She had recognized her lover by his intrepidity. The spectacle of an object so lovely, exposed to such terrible danger, filled every one with sorrow and distraction. For *Jeanette*, she, with a noble and composed mein, made a motion of her hand toward us, that seemed to say—"farewel for ever!" There was only one sailor who had not already thrown himself into the sea, in the hope of making land. We saw him approach *Jeanette*, and the people on shore cried out—"Save her, save her, do not quit her!" But, at this moment a mountain of water of terrific magnitude, engulfed itself between the Isle of Amber and our coast, and advancing roaring toward the vessel, presently overwhelmed it, with black sides, and foaming summits.

O horrible day! Alas! all was swallowed up.
The

The surge cast far up the shore a part of the spectators whom the impulse of humanity had drawn toward *Jeanette*, and the seaman who had endeavoured to preserve her life. *Domingo*, and myself, drew out of the waves the unfortunate *Henry*, who was totally insensible, the blood gushing from his mouth and ears. The governor placed him in the hands of the surgeons; and we searched along the shore, to see if the waves had brought the body of *Jeanette*.

Meanwhile, they placed *Henry*, who began to recover his senses, in a neighbouring house, till he was in a condition to be carried to his own dwelling. For myself, I returned with *Domingo*, for the purpose of preparing the mother of *Jeanette*, and her friend, for this disastrous event. When we were at the entrance of the valley of the river of the *Lataniers*, some slaves told us that, the sea had cast a considerable part of the wreck upon the opposite bay. We descended thither; and one of the first objects that we beheld was the body of *Jeanette*. It was half covered with sand. Her features were scarcely altered. Her eyes were closed, but serenity still sat upon her forehead: the pale violets of death had mingled with her roses. One of her hands was upon her clothes; from the other, I disengaged, with much difficulty, a little box: but what was my astonishment when I found that it contained the portrait of *Henry*, which she had promised him to keep while she had life! At this last mark of constancy and affection in this unfortunate girl, I wept bitterly. *Domingo*, beat his breast, and pierced the air with expressions of grief. He carried the body of *Jeanette* to a fisherman's cottage, and left it to the care of some Malabar women.

We ascended, trembling, toward the plantation. We found Madame *de la Tour*, and *Margaret*, waiting intelligence of the ship. As soon as Madame

dame *de la Tour* perceived me, she cried out: "Where is my daughter? my dear daughter? my "child?" My silence and my tears would not suffer her to doubt her misfortune. She was instantly seized with suffocating and agonizing spasms: her voice could be heard only in sighs and sobbings. *Margaret* exclaimed—"Where is my son? I do not see my "son!" She fainted. We ran to her, and recovered her. I assured her that her son lived, and that the governor had taken care of him. She recovered her senses only to employ them for the comfort of her friend, who perpetually fell into long fainting fits. *Madame de la Tour* passed the whole night in these cruel sufferings; and from the length of their duration, I have concluded that, No sorrow equals the sorrow of a mother.

CHAPTER XV.

M. *de la Bourdanaye* privately informed me that, the body of *Jeanette* had been brought to the city by his order; and that, thence, it would be carried to the church of Pamplemonsses. I went down to Port-Louis, immediately, where I found the inhabitants assembled from all parts, to assist at the funeral; as if the island itself had lost, in *Jeanette*, all that it most valued. In the port, the ships had their sail-yards crossed, their flags lowered, and they fired guns at long intervals. A grenadier company led the procession. They carried their arms reversed; their drums, covered with long pieces of crape, returned only dismal sounds; and dejection was painted upon the countenances of these warriors who had many times faced death in battle without changing colour. Eight young ladies, of the highest consideration in the island, habited in white, and carrying branches of palm in their hands, attended the body of *Jeanette*, that was covered with flowers. A choir of little children followed, singing hymns: after these came all the most distinguished persons of the island, both planters and officers of high rank; following whom, walked the governor, and then the multitude.

This the administration had done to honour the virtues of *Jeanette*. But when the body had arrived at the foot of this mountain, at the sight of these very cottages

cottages of which she had so long been the happiness, and which her death had now filled with despair, all the pomp of mourning was deranged; the hymns and chanting ceased; nothing but sighs and sobs were to be heard over the plain.

When it had arrived at the church of Pamplemonssies, the negresses of Madagascar, and the caffres of Mosambique, placed baskets of fruit around the body, and suspended pieces of stuff in the neighbouring trees, according to the custom of their country. The Indians of Bengal, and of the coast of Malabar, brought cages full of birds, to whom they gave liberty over her body: so deeply does the loss of an amiable object interest all nations; and so great is the power of unfortunate virtue, since it unites the professors of all religions round its tomb.

The grave is near the church, on the western side, at the foot of a clump of bamboos, where, in accompanying her mother and *Margaret* to mass, *Jeanette* had loved to rest herself, seated by the side of him whom she then called her brother.

Henry was buried near *Jeanette*, at the feet of the same canes, and, close to these, their tender mothers and their faithful domestics. No one has raised marble over their humble hillocks, nor engraved inscriptions of their virtues; but their memory remains indelible in the hearts of those who knew them. Their shades do not require that renown which was withheld from them during life: but if they still interest themselves concerning that which happens on the earth, doubtless, they love to wander under the straw roofs, that shelter industrious virtue, to console poverty that is repining at its lot; and to nourish in the bosom of young lovers constancy in affection, a taste for the blessings of Nature, a love of labor, and the dread of riches.

Young people so tenderly united! unfortunate mothers!

mothers ! beloved family ! these woods that gave you shade ; these fountains that flowed for you ; these rocks whereon you reposed together, still deplore your loss. No one, since you, has ventured to cultivate this desolate place, nor raise again these humble cottages ! Your goats have become wild ; your orchards are destroyed ; your birds have fled away, and nothing now is heard but the cries of the hawks, who watch round the top of this rocky basin ! For myself, since that I see you no more, I am like a friend that has no friend ; like a father that has lost his children ; like a solitary traveller that wanders over the earth.

In saying these words, the good old man left me, unable to say any thing, because of his tears ; and I had wept much during his melancholy story.

THE END.

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